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Supplement to

Management Services in Government

May 1978 Volume 33 Number 2

Computer Installations for Government Departments

Civil Service Department,
Central Computer Agency

Preface

Information about computers used by government departments for administrative and general, and scientific and technical purposes is published annually with the May issue of MANAGEMENT SERVICES IN GOVERNMENT; particulars of further orders are given in other quarterly editions.

Details of computers for administrative and general purposes installed and on order at 1st January 1977 are shown in Tables 1A and 1B, and similar information about computers for scientific and technical purposes is given at Tables 2A and 2B. Computers for scientific control systems and flight simulators are not included.

A computer for inclusion in these tables must:

(*a*) Operate under stored program control and use wholly digital representation.

(*b*) Cost at least £10,000.

(*c*) Not form part of processor-controlled keying equipment.

The total of computers installed for administrative and general purposes is 189, and a further 12 are on order. Corresponding figures for computers installed for scientific and technical purposes are 225 and 19.

Included in this supplement are a number of installed computers, in both the administrative and scientific categories, which were omitted from the 1977 supplement.

Keys to the abbreviations used under 'Department' (*column* 2) and 'Manufacturer' (*column* 5) are included at the last page.

The information contained in this supplement is provided by the Central Computer Agency. Inquiries should be addressed to Planning Publications and Information, C2, Central Computer Agency, Riverwalk House, 157–161 Millbank, London SW1P 4RT.

1A Computers for administrative and general purposes installed in departments as at 31st December, 1977

ACCEPTANCE DATE	DEPARTMENT[1]	LOCATION	MAIN USES	MANUFACTURER[2] AND TYPE OF COMPUTER
December 1964	ECGD	London	Statistics and accounts	IBM 1401G
April 1966	MOD (Central)	Liverpool	Bill paying	NCR 315
February 1967	MOD (PE)	Glascoed	Stock control, costing and payroll	NCR 500
April 1967	MOD (PE)	Glascoed	Stock control, costing and payroll	NCR 500
April/July 1967	ODM	London	Pay, pensions and accounts	2 × NCR 500
May 1968	HO and Met. Pol.	London	Bureau work including traffic tickets	ICL 1905E
June 1968	MOD (Air)	Quedgeley	Stock control	ICL 1903
July 1968	MOD (Air)	Hartlebury	Stock control	ICL 1903
July 1968	PGO	Crawley	Pension payments and banking	ICL 4/50
September 1968	MOD (Central)	Cheadle Hulme	Punched card processing	ICL 1901
January 1969	MOD (Army)	Glascoed	Payroll, stock control, costing	2 × NCR 500
February 1969	Scottish Office	Edinburgh	Vote accounting payments	NCR 500
February/May 1969	DHSS	Newcastle	Pension payments, pay and statistics, family allowances	2 × ICL 4/70
May 1969	MOD (Army)	Donnington	Stock control	ICL 1901
May 1969	CSD	Norwich	Bureau work	ICL 1907F
June 1969	DHSS	Newcastle	Short-term benefits reconciliation	ICL 1901
August 1969	MOD (Army)	Chilwell	Stores control	ICL 1901
September 1969	MOD (Central)	Hullavington	Stores codification and cataloguing	2 × ICL 1904E
March 1970	MOD (Central)	Cheadle Hulme	Industrial civil pay and records	ICL 1904E
March 1970	MOD (Army)	Arborfield	Training and research	Elliott 803B
April 1970	Environment	London	Financial statistics	ICL 1903A
August 1970	MOD (Navy)	Collingwood	Electrical engineering training	IBM 1130
August 1970	MOD (Central)	Cheadle Hulme	Industrial civil pay and records	ICL 1904E
August 1970	MOD (Army)	Worthy Down	Records and pay of Army personnel	IBM 360/50
October 1970	MOD (Central)	Liverpool	Bill paying	2 × Philips Data 8000
December 1970	MOD (Central)	Liverpool	Bill paying	2 × Philips Data 8000
February 1971	MOD (PE)	Chorley	Royal Ordnance Factories bureau	ICL 1902S

ACCEPTANCE DATE	DEPARTMENT[1]	LOCATION	MAIN USES	MANUFACTURER[2] AND TYPE OF COMPUTER
February 1971	MOD (Air)	Swanton Morley	Technical maintenance data	ICL 1904A
March 1971	MOD (Central)	Bath	Non-industrial civil pay and records	ICL 1904A
March 1971	Inland Revenue	Worthing	Tax accounting and PRISM	ICL 1904A
March 1971	Inland Revenue	Liverpool	PAYE collection and accounting, etc.	ICL 1904A
April 1971	MOD (Army)	Sandhurst	Training	Elliott 803B
April 1971	MOD (Air)	Northwood	Evaluation and research	ICL 1903A
May 1971	Transport	Swansea	Vehicle registration and licensing; driver licensing	ICL 4/70
May 1971	MOD (Army)	Bicester	Stock control	ICL 1906F
June 1971	PGO	Crawley	Banking and pensions work	ICL 4/50
September 1971	MOD (Air)	Carlisle	Stores, stock control	ICL 1903A
October 1971	Trade	Newport	Trade census statistics and Business Statistics Office	ICL 1906A
October 1971	MOD (Navy)	Rosyth	Computer bureau	ICL 1904A
December 1971	MOD (Army)	Llangennech	Stores, stock control	IBM 360/25
December 1971	MOD (Navy)	Chatham	Computer bureau	ICL 1904A
December 1971	MOD (Army)	Bicester	Stock control	ICL 1906A
January 1972	MOD (PE)	Farnborough	General purpose, research and administration	ICL 1904A
February 1972	DHSS	Newcastle	Contribution records and graduated pensions	ICL 1906A
February 1972	MOD (Navy)	Devonport	Computer bureau	ICL 1904A
February 1972	Inland Revenue	Worthing	Tax accounting, PRISM	ICL 1904A
February 1972	MOD (Army)	Shrivenham	Training and research	DEC PDP 11/20
February 1972	MOD (Army)	Berlin	Provisioning and stock control	ICL 1902A
April 1972	ECGD	London	Statistics, accounts, bank guarantees and long-term credits	IBM 1401B (Second-hand)
May 1972	MOD (Central)	London	Bureau work	ICL 1907F
May 1972	MOD (Air)	Stafford	Stores, stock control	ICL 1903A
July 1972	MOD (Air)	High Wycombe	General ADP	ICL 1904S
July 1972	Home Office	Hendon	Police records	2 × Burroughs B6700

July 1972	DHSS	London	Medical manpower statistics	ICL 1901A
August 1972	MOD (Army)	Viersen	Stores	ICL 1902S
August 1972	MOD (Navy)	Ensleigh	Naval victualling and stock control	ICL 1906A
August 1972	DHSS	Newcastle	Contribution records and graduated pensions	ICL 1906A
August 1972	Customs and Excise	Southend	Value Added Tax	ICL 4/72
August 1972	PWLB	London	Loan repayments	ICL 1901A
September 1972	MOD (Navy)	Faslane	Stock control	ICL 1903A
October 1972	MOD (Air)	Hendon	Stores	ICL 4/72
October 1972	National Savings	Glasgow	Savings Bank	ICL 4/72
November 1972	Employment	Runcorn	Pay, statistics, Professional and Executive Register	ICL 1904S
December 1972	Transport	Swansea	Vehicle registration and licensing, driver licensing	ICL 4/72
January 1973	HO and Met. Pol.	London	Pay and statistics; traffic tickets; prison records	ICL 1904A
January 1973	MOD (Army)	Chatham	Planning and research	Elliott 803B
February 1973	Transport	Swansea	Cheque reading and sorting for central licensing system	IBM System 3
March 1973	CSD	Chessington	Payroll accounting and staff records	ICL 1904S
March 1973	MOD (Air)	Hendon	Stores	ICL 4/72
March 1973	Environment	Hastings	Integrated accounting process	ICL 1906A
March 1973	Customs and Excise	Southend	Cheque reading and sorting for VAT scheme	IBM System 3
May 1973	CSD	Chessington	Civil Service personnel information retrieval and statistics (PRISM)	ICL 1904S
June 1973	Land Registry	Plymouth	Index of land charges	IBM 370/145
August 1973	DHSS	Reading	Unemployment benefit payments	2 × ICL 1904S
August 1973	MOD (Air)	Hendon	Stores	CIL System 90
September 1973	DHSS	Newcastle	Graduated pensions records	ICL 1906A
September 1973	MOD (Army)	Blandford	Training and research	2 × HP 3000CX
October 1973	Transport	Swansea	Vehicle registration and licensing, driver licensing	ICL 4/72
October 1973	Cabinet Office/ Treasury	London	Econometric modelling, statistical research and progress development	Univac 1106
October 1973	British Museum	London	Information retrieval	HP 2100A

ACCEPTANCE DATE	DEPARTMENT[1]	LOCATION	MAIN USES	MANUFACTURER[2] AND TYPE OF COMPUTER
December 1973	Inland Revenue	East Kilbride	PAYE assessment accounting and collection for Scotland	ICL 1904S
December 1973	National Savings	Lytham St. Annes	Premium Savings Bonds and Stocks	ICL 4/72
December 1973	MOD (Army)	Sandhurst	Training	2 × Elliott 803B
January 1974	MOD (Army)	Worthy Down	Pay and records of Army personnel	IBM 370/158
February 1974	MOD (Army)	Larkhill	Computer appreciation and elementary programming	Ferranti Argus 100R
March 1974	MOD (Air)	Sealand	General ADP	2 × Elliott 803
March 1974	MOD (Central)	Bath	Pensions and accounts	ICL 1903T
March 1974	Home Office	Hendon	Police records	Burroughs B6700
June 1974	MOD (Army)	Hong Kong	Stores provisioning and stock control	ICL 1902A
July 1974	DHSS	Fleetwood	Health Service superannuation duties and general departmental work for Blackpool Central Office	ICL 1904S
August 1974	National Savings	Glasgow	Savings Bank	ICL 4/72
September 1974	MOD (Army)	Woolwich	Maintenance of data and reliability studies	ICL 1904S
October 1974	Environment	Hastings	Payroll, etc.	ICL 1904S
October 1974	MOD (Army)	Shrivenham	Training and research	DEC PDP 11/45
November 1974	MOD (Air)	Kinloss	General ADP	ICL 2903
November 1974	DHSS	Newcastle	Pensions statistics and family allowances	ICL 4/72
January 1975	MOD (Navy)	Ensleigh	Control	ICL 2903
January 1975	MOD (PE)	Portsmouth	General ADP	Honeywell 61/58
January 1975	MOD (Air)	Locking	General ADP	ICL 4130
March 1975	DES	Darlington	Educational statistics	ICL 1906A
March 1975	MOD (Central)	Liverpool	Bill paying and accounts	ICL 1901T
March 1975	Foreign and Commonwealth Office	London	Accommodation and services; bill paying and accounts; library	Olivetti DE 523
April 1975	MOD (Air)	Benson	Management of Electrical Engineering Instructions	ICL 2903
April 1975	MOD (Air)	Innsworth	Airmen's pay and records	Univac 1106
April 1975	MOD (Air)	Aldergrove	Management	ICL 2903

May 1975	MOD (Air)	St. Athan	Management	ICL 2903
May 1975	MOD (Navy)	Portsdown	Maintaining database of all stock items including purchase and control data	Honeywell 61/58
May 1975	MOD (Air)	Kemble	Management	ICL 2903
May 1975	CSD	Bracknell	Central Computer Facility	ICL 2970
June 1975	National Savings	Durham	Savings Certificates, urgent stream repayments	BC(S)L Molecular 18
June 1975	MAFF	Guildford	Bureau work	ICL 1904S
June 1975	MOD (Air)	Harrogate	Logistic control	ICL 2903
June 1975	OPCS	Titchfield	Population census and survey analysis	ICL 1906S
June 1975	Home Office	Corby	Supply and transport, stock control and statistics	MBM 7000
June 1975	MOD (PE)	St. Mary Cray	Processing and control of technical literature	GEC 40/80
July 1975	MOD (Army)	Shrivenham	Training and research	DEC PDP 11/40
July 1975	MOD (Air)	Abingdon	Planning and control	ICL 2903
July 1975	MOD (Central)	Hullavington	Stores codification and cataloguing	ICL 1904E
July 1975	Industry	London	Instrument data logging and information retrieval	RX 530
July 1975	MOD (Navy)	Eaglescliffe	Stock control	Univac 494
September 1975	MOD (PE)	Bath	Design, procurement, support	DEC PDP 11/50
September 1975	Ordnance Survey	Southampton	General purpose, administration and cartographic	ICL 1906S
September 1975	MOD (PE)	Bath	Design	DEC PDP 11/40
September 1975	Customs and Excise	Southend	Value Added Tax	ICL 4/72
September 1975	MOD (Navy)	Copenacre	Stock control	Univac 494
September 1975	Employment	Runcorn	Pay and statistics	ICL 1904S
September 1975	Scottish Office	Edinburgh	General ADP	2 × IBM 370/145
November 1975	MOD (Air)	Harrogate	General ADP	ICL 2903
December 1975	MOD (Navy)	Portsmouth	Computer bureau	ICL 1904S
January 1976	Customs and Excise	Southend	Statistics	ICL 4/72
February 1976	MOD (Army)	Blandford	ADP training	DEC PDP 10
February 1976	MOD (Army)	Rheindahlen	General ADP	ICL 1902S
March 1976	HO and Met. Pol.	London	Pay and statistics	ICL 1904S
April 1976	MAFF	Guildford	Subsidy payments, payroll, statistics	ICL 1904S
April 1976	HO and Met. Pol.	London	Pay and statistics	ICL 1904S

ACCEPTANCE DATE	DEPARTMENT[1]	LOCATION	MAIN USES	MANUFACTURER[2] AND TYPE OF COMPUTER
May 1976	MOD (Air)	Locking	Electronic technicians' training	2 × Prime P300
June 1976	MOD (PE)	Nottingham	General ADP	ICL 2903
June 1976	MOD (Navy)	Gosport	Pay and records	ICL 1904A
June 1976	Transport	Swansea	Cheque reading and sorting	IBM System 3
July 1976	MOD (Air)	Innsworth	Pay and records	ICL 2970
July 1976	Environment	Croydon	Text editing	Ventek 1104
July 1976	ECGD	Cardiff	Statistics; accounts; bank guarantees; long-term credits	IBM 370/135
July 1976	MOD (Air)	High Wycombe	Command and control tasks	ICL 2903
August 1976	GRO (Scotland)	Edinburgh	Population statistics	ICL 1903A
September 1976	MOD (Air)	Locking	Electronic technicians' training	DEC PDP 11/45
September 1976	British Museum	London	Data collection and cataloguing	Varian V72
September 1976	DHSS	Reading	Unemployment benefit payments	ICL 1904S
September 1976	DHSS	Newcastle	Pensions and statistics	ICL 2970
September 1976	MOD (Navy)	Llangennech	Stores accounting	IBM 370/115
October 1976	MOD (Army)	Wilton	General ADP	CTL Modular 1
October 1976	Royal Mint	Glamorgan	Metal accounts; payroll; sales invoices and payments; general accounting, mail order fulfilment	ICL Singer 10
November 1976	MOD (Navy)	Devizes	Bureau West	ICL 2980
November 1976	DHSS	Livingston	Unemployment benefits	2 × ICL 1904S
November 1976	Cabinet Office/ Treasury	London	Econometric modelling, statistical records and progress development	Univac 1106
November 1976	MOD (Navy)	Fleetlands	General ADP	CMC 6000
November 1976	MOD (Central)	Cheadle Hulme	Civilian pay and records	ICL 1903T
November 1976	MOD (Navy)	Feltham	Production of marine charges	ICL 1903A
December 1976	Industry	Eastcote	General ADP	ICL 1904S
March 1977	Inland Revenue	Liverpool	PAYE on-line pilot study	Honeywell 716
March 1977	MOD (Air)	Bracknell	Library service	DEC PDP 11/34
March 1977	MOD (Central)	London	Defence statistics	Prime 300
March 1977	MOD (PE)	Malvern	Research in non-numerical analysis and secretariat	ICL 1906S

April 1977	MOD (Army)	Feltham	Geodetic computation and processing of mapping data	ICL 1903A
May 1977	MOD (Air)	Sealand	Avionic direct exchange scheme	DEC PDP 11/34
May 1977	MOD (Air)	Hendon	Stores control	ICL 4/72
June 1977	MOD (Army)	Arborfield	General computing	DG Nova 3/12
June 1977	Inland Revenue	Cumbernauld	Tax collection; Schedule D assessment	ICL 2970
September 1977	DHSS	Livingston	Unemployment benefits	ICL 1904S
October 1977	MOD (PE)	Chorley	Royal Ordnance Factories bureau	ICL 1903T
October 1977	HO and Met. Pol.	London	Pay and statistics	2 × ICL 1904S
October 1977	DHSS	Newcastle	Pensions and payroll projects	ICL 2980
November 1977	DHSS	London	Provision of medical manpower statistics	ICL 2903
December 1977	MOD (Central)	London	Defence statistics	Prime 300
December 1977	Transport	Hemel Hempstead	Road accident statistics	ICL 2903

1B Computers for administrative and general purposes on order as at 1st January, 1978

DATE OF ORDER	DEPARTMENT[1]	LOCATION	MAIN USES	MANUFACTURER[2] AND TYPE OF COMPUTER
July 1975	PGO	Crawley	Pensions payments, banking	2 × ICL 2970
September 1975	Public Record Office	London	Statistics and registration system	DG Nova 2
December 1976	DHSS	Washington	Child benefits statistics	ICL 2980
February 1977	CSD	Norwich	Management accounting for HMSO, and general	ICL 2976
July 1977	MOD (Army)	Bicester	Stock control	ICL 1904S
July 1977	MOD (Army)	Chilwell	Stock control	ICL 2903
September 1977	Environment	Hastings	Payroll	ICL 1904S
October 1977	MOD (Army)	Malvern	Defects and modifications records, management information system, text editing	ICL 2903
November 1977	Industry	East Kilbride	Signal controller between main-frames and data communications	DEC PDP 11/03 micro-system
November 1977	Home Office	London	Police records	Burroughs Triple 7700
December 1977	OPCS	Titchfield	Data preparation	CMC S220

2A Computers for scientific and technical purposes installed in departments as at 31st December, 1977

ACCEPTANCE DATE	DEPARTMENT[1]	LOCATION	MAIN USES	MANUFACTURER[2] AND TYPE OF COMPUTER
April 1962	MOD (Army)	Arborfield	Training and research	ICL 803B
January 1964	MOD (Army)	Sandhurst	Training and research	ICL 803B
May 1964	MOD (PE)	Christchurch	Research	Elliott 920A
July 1964	Industry	Teddington	Research	Ferranti Hermes
August 1964	Industry	Teddington	Scientific calculations	2 × ICL KDF9
January 1965	MOD (Navy)	Teddington	Mathematical applications	ICL KDF9
July 1965	MOD (PE)	Boscombe Down	Scientific applications	ICL 503
November 1965	Industry	Teddington	Display research and spectrometry	Elliott 903B
December 1965–66	MOD (Army)	Slough	General scientific R & D	2 × Elliott 903
March 1966	Industry	Teddington	Programming research	ICL 4120
April 1966	Industry	East Kilbride	Machine tool design	Univac 1108
June 1966	MOD (PE)	Pyestock	Program development	DEC PDP 7
January 1967	MOD (Navy)	Alverstoke	On-line process control	DEC PDP 8S
January 1967	MOD (PE)	Christchurch	Laboratory data analysis	GEC Myriad
January 1967	MOD (Navy)	Frimley	Research	Elliott 920B
February 1967	MOD (PE)	Pyestock	Test analysis	SDS 9300
February 1967	MOD (Air)	Cranwell	Training and research	ICL 4120
May 1967	MOD (PE)	Malvern	Air traffic control	Marconi Myriad
May 1967	MOD (Navy)	Derby	Engineering calibration and measurement	SDS 90/2
June 1967	MOD (Navy)	Manadon	Engineering training	IBM 1130
July 1967	MOD (PE)	Christchurch	Data reductions and scientific use	ICL 4130
November 1967	MOD (PE)	Malvern	Research	DEC PDP 9
November 1967	MOD (PE)	London	Performance calculations	ICL 1901S
January 1968	MOD (Air)	Farnborough	Data analysis	HP 2116B
January 1968	MOD (Navy)	Teddington	Extension to ICL KDF9	DEC PDP 8
February 1968	Industry	Teddington	On-line recording	DEC PDP 8

ACCEPTANCE DATE	DEPARTMENT[1]	LOCATION	MAIN USES	MANUFACTURER[2] AND TYPE OF COMPUTER
March 1968	MOD (PE)	Malvern	Research	DEC PDP 9
May 1968	MOD (PE)	Bedford	Kine-theodolite system	ICL 4130
May 1968	MOD (Navy)	Haslar	Research	IBM 1130
June 1968	MOD (PE)	Aberporth	Data analysis	IBM 1130
October 1968	Industry	Cambridge	Development of computer-aided design facility	DEC PDP 9
October 1968	MOD (PE)	Malvern	Circuit research	ICL 4130
October 1968	MOD (PE)	Bramshott	Instrumental analysis	Honeywell DDP 516
October 1968	MOD (Navy)	Taunton	Data logging and analysis of oceanographic data	Elliott 920B
December 1968	MOD (PE)	Farnborough	System research	IBM 1130
December 1968	MOD (Navy)	Teddington	Real-time analysis of experiments	HP 2114
December 1968	MOD (Army)	Eskmeals	Real-time data analysis	Elliott 920B
January 1969	DAFS	Aberdeen	Fishery research	Elliott 903C (Second-hand)
February 1969	MOD (PE)	Waltham Abbey	Data processing and process control	Elliott 903C (Second-hand)
March 1969	Industry	Cambridge	Development of computer-aided design facility	ICL Atlas II
March 1969	Industry	Teddington	Message switching research	Honeywell DDP 516
March 1969	DAFS	Aberdeen	Fishery research, data logging	Elliott 920C
April 1969	Industry	Teddington	Research	Honeywell DDP 516
June 1969	Home Office	London	Statistical analysis	IBM 1130
July 1969	Industry	Teddington	Pattern processing research	Honeywell DDP 516
July 1969	Transport	Crowthorne	Road research and general scientific work	ICL 4/70
July 1969	MOD (Navy)	Greenwich	Training and research	IBM 1130
July 1969	MOD (Army)	Greenwich	Scientific training and research	IBM 1130/3C
July 1969	MOD (Army)	Shoeburyness	Real-time data analysis	Elliott 920
July 1969	MOD (Air)	Farnborough	General-purpose computing	IBM 1130
September 1969	Industry	Teddington	Scientific research	ICL KDF 9
December 1969	Industry	Cambridge	Development of computer-aided design facility	CTL Modular 1
December 1969	MOD (Army)	Feltham	Geodetic computations and processing of digitized mapping	ICL 1902A

December 1969	Industry	Teddington	Communication control	Honeywell DDP 516
January 1970	MOD (Navy)	Malvern	Program development and computer networks	CTL Modular 1
January 1970	DHSS	Roehampton	Biomechanical research	Elliott 905
March 1970	Industry	Teddington	Display research and spectrometry	Elliott 905
March 1970	MOD (PE)	Malvern	Research and testing of machines	CTL Modular 1
May 1970	MOD (PE)	Bedford	Data analysis and general scientific computing	ICL 4130
May 1970	MOD (PE)	Farnborough	General computing	IBM 1130
May 1970	MOD (PE)	Bedford	Wind tunnel data	Honeywell DDP 516
May 1970	MOD (PE)	Malvern	Research in non-numerical analysis	ICL 1907F
May 1970	MOD (Army)	Shrivenham	Instruction and research	ICL 1903A
July 1970	MOD (Army)	London	Research	Elliott 920
July 1970	MOD (Navy)	Teddington	Real-time analysis of experiments	HP 2116C
July 1970	MOD (Air)	Boscombe Down	Data analysis	Honeywell DDP 516
July 1970	MOD (Air)	Farnborough	Research	2 × Elliott 920C
July 1970	MOD (Air)	Farnborough	Research	Redifon 2000
July 1970	MOD (Air)	Farnborough	Research	DEC PDP 10
July 1970	MOD (PE)	Malvern	Data logging	DEC PDP 11/20
July 1970	MOD (PE)	Christchurch	Software development	2 × CTL Modular 1
July 1970	MOD (PE)	Christchurch	Laboratory data analysis	Honeywell DDP 316
July 1970–71	MOD (Air)	Bedford	Research	3 × Honeywell DDP 516
September 1970	MOD (PE)	Malvern	Experimental work on air traffic control systems	CTL Modular 1
September 1970	MOD (Navy)	Dunfermline	Ship design calculations	IBM 1130
October 1970	MOD (Navy)	Fareham	Electrical engineering training	IBM 1130
October 1970	MOD (PE)	Pyestock	Structural and data analysis	IBM 1130
December 1970	Environment	Croydon	Construction analysis design and research	IBM 1130
January 1971	Industry	Teddington	Remote file storage	Honeywell DDP 516
February 1971	Industry	Teddington	Man/machine interaction research	CTL Modular 1
March 1971	MAFF	Aberdeen	Data logging analysis, general scientific work	IBM 1130
April 1971	MOD (PE)	Boscombe Down	Magnetic tape replay/display system	Honeywell DDP 516
May 1971	MOD (PE)	Malvern	Display research	CTL Modular 1
May 1971	Forestry Commission	Farnham	General scientific computing	IBM 1130

ACCEPTANCE DATE	DEPARTMENT[1]	LOCATION	MAIN USES	MANUFACTURER[2] AND TYPE OF COMPUTER
July 1971	MOD (PE)	Farnborough	General program work	Honeywell DDP 316
September 1971	Industry	Feltham	Scientific applications	Honeywell DDP 316
October 1971	HO and Met. Pol.	London	Fingerprint retrieval research project	Ferranti Argus 500
November 1971	MOD (Navy)	Portland	General scientific work	ICL 1904S
November 1971	MOD (PE)	Farnborough	Batch and ADP processing	ICL 1904A
November 1971	Industry	Teddington	Wind tunnel instrumentation	Honeywell DDP 516
November 1971	MOD (Navy)	Portland	Research	GEC 905/928
December 1971	MOD (Air)	Bracknell	Meteorological research and forecasting	IBM 300/195
December 1971	MOD (Army)	Porton	Research	ICL 1905
December 1971	MOD (Army)	Alverstoke	On-line process control	DEC PDP 8E
December 1971	MOD (Army)	Portsdown	General scientific	Wang 3300
December 1971	MOD (Air)	Farnborough	Research	Ferranti Argus 500L
December 1971	MOD (Air)	Farnborough	Research	2 × GEC 102
December 1971	MOD (Air)	Bracknell	Meteorological research and forecasting	IBM 360/195
December 1971	MOD (PE)	Malvern	Scientific research	CTL Modular 1
January 1972	MOD (PE)	Westcott	Systems simulation	IBM 1130
January 1972	MOD (Navy)	Portsdown	General research	Elliott 905
January 1972	MOD (PE)	Farnborough	General-purpose computing	DG Nova 1200
January 1972	MOD (Navy)	Portsdown	Research	GEC 905
January 1972–73	MOD (Army)	Holton Heath	On-line monitoring and analysis of trials	2 × HP 2100A
February 1972	MOD (Army)	Porton Down	General scientific applications and management service	ICL 1905 (Second-hand)
March 1972	Industry	Stevenage	General research	ICL 1903
May 1972	Industry	Teddington	Disc file system	Honeywell DDP 516
May 1972	Industry	Teddington	Remote job entry	HP 2100
May 1972	Industry	Cambridge	Communications project	DEC PDP 11/20
June 1972	Industry	Teddington	Graphic editing	DEC PDP 11/20
June 1972	Transport	Crowthorne	Conversion of data from recording devices	HP 2100
June 1972	MOD (Army)	Shrivenham	Research and data logging	DEC PDP 11/20
August 1972	MOD (PE)	Farnborough	Signal analysis	HP 2100A
August 1972	MOD (PE)	Westcott	Scientific applications	DEC PDP 11/20

October 1972	MOD (Air)	High Wycombe	Control tasks	ICL 1904A
November 1972	DHSS	London	Computer-aided design/development in Health Buildings	Elliott 905
December 1972	Environment	Wallingford	Hydraulics research	ICL 1904S
February 1973	MOD (PE)	Malvern	Translation of trials data	DEC PDP 15/20
February 1973	MOD (PE)	Pyestock	General scientific computing	DEC PDP 11/10
March 1973	MOD (PE)	Farnborough	Analysis of airworthiness data	Honeywell DDP 516
March 1973	DAFS	Aberdeen	Fishery research data logging	Elliott 905
March 1973	MOD (PE)	Farnborough	Computer-aided design, program development	DEC GT 40
May 1973	MOD (Central)	West Byfleet	Operational research	ICL 1904S
May 1973	MOD (PE)	Teddington	Computer-aided ship design	DEC PDP 11/45
May 1973	MOD (PE)	Bedford	Simulation	RX Sigma 8
August 1973	MOD (PE)	Boscombe Down	Real-time flight recording system	RX Sigma 6
November 1973	Environment	Borehamwood	Fire statistics, scientific calculations	ICL 1902A
November 1973	MOD (PE)	Farnborough	Research	DEC PDP 11/45
December 1973	Industry	Teddington	Experimental research information service	CTL Modular 1
December 1973–74	MOD (Air)	Farnborough	Trials data processing	2 × DEC PDP 8F
February 1974	Environment	Sheffield	General research	DEC PDP 8F
February 1974	MOD (Army)	Blandford	Signals training	2 × HP 3000
March 1974	MOD (Navy)	Manadon	Data logging of engine performance	Varian 620L
March 1974	Industry	Cambridge	Design research	Prime 300
March 1974	Industry	Cambridge	Design research	DEC PDP 11/20
March 1974	Environment	Sheffield	General research	Varian 620L
March 1974	Industry	Teddington	Marine research	Honeywell DDP 516
March 1974	MOD (Navy)	Cobham	General scientific calculations	Varian V72
April 1974	MOD (Navy)	Collingwood	Engineering training	DEC PDP 8F
April 1974	MOD (Air)	Deeside	Training	ICL 803A (Second-hand)
April 1974	MOD (PE)	Bedford	Experiments of models oscillated in wind tunnels	DEC PDP 11/20
April 1974	MOD (PE)	Farnborough	Research	DEC PDP 11/40
April 1974	MOD (Army)	Feltham	Cartographic work and scientific computations	ICL 1903T
May 1974	MOD (PE)	Fort Halstead	Scientific calculations, management information and accounting	ICL 1906A

ACCEPTANCE DATE	DEPARTMENT[1]	LOCATION	MAIN USES	MANUFACTURER[2] AND TYPE OF COMPUTER
June 1974	MOD (Air)	Northwood	Analysis of aircraft data	ICL 1903A
June 1974	MOD (Air)	Bracknell	Research on data from weather instruments	DEC PDP 11/40
July 1974	MOD (PE)	Westcott	Scientific design calculations	ICL 1904S
August 1974	MOD (Army)	Chertsey	Vehicle research	ICL 1903T
August 1974	MOD (Navy)	Coulport	Scientific testing	CTL Modular 1
September 1974	MOD (PE)	Farnborough	General computing	2 × ICL 1906S
January 1975	MOD (Air)	Bracknell	Weather forecasting and research	IBM 370/158
February 1975	MOD (PE)	Shoeburyness	Data analysis	Interdata M7/16
February 1975	MOD (Navy)	Cosham	Scientific research	Honeywell 61/58
March 1975	MOD (Navy)	Manadon	Training of engineering officers; management projects	RX Sigma 6
March 1975	Home Office	London	Allocation of frequencies for mobile and private radios	CDC 17
March 1975	MOD (PE)	Malvern	Program support and experimental network	GEC 4080
March 1975	Industry	Cambridge	Design research	Prime 300
March 1975	Environment	Sheffield	General research	RX Sigma 6
March 1975	Environment	Reading	Hydrometric data processing	ICL 1904S
March 1975	MOD (PE)	Bedford	Wind tunnel data acquisition analysis	DEC PDP 11/40
April 1975	Industry	East Kilbride	Engineering research	Ferranti Argus 700S
April 1975	Industry	East Kilbride	Engineering research	Ferranti Argus 700T2
April 1975	MOD (PE)	Porton Down	Analysis of analogue outputs	Varian 620/L
May 1975	Environment	Sheffield	General research	DEC PDP 11/10
May 1975	MOD (Army)	Feltham	Mathematical work	CTL 5/90
June 1975	MOD (Army)	Chertsey	Vehicle research	Interdata M70
June 1975	MOD (Air)	Farnborough	Graphics display	DEC PDP 11/40
July 1975	MOD (PE)	Farnborough	Graphic facility for computer users	DEC PDP 11/40
July 1975	Home Office	Kidlington	Police intelligence data	Honeywell 6040
August 1975	MOD (PE)	London	Data analysis, fragmentation studies, research, development, production	GEC 4080
August 1975	MOD (PE)	Farnborough	General-purpose digital computing	DEC PDP 11/45

October 1975	Environment	Watford	Combined use for Building and Fire Research Stations	ICL 1904S
December 1975	MOD (Central)	West Byfleet	Operational research	ICL 2970
March 1976	Environment	Croydon	Construction design and research	CTL Modular 1
March 1976	Industry	London	Instrument data logging and information retrieval	RX DS 530
April 1976	MOD (PE)	Malvern	Communications processor	ICL 7905
April 1976	MOD (Army)	Blandford	Computer training and research	DEC KI10
May 1976	MOD (PE)	Farnborough	Program development and control	Varian V72
May 1976	DHSS	London	Computer-aided design, development in Health Buildings	Ferranti Argus 700
May 1976	MOD (PE)	Fort Halstead	Instrumentation systems support	DEC PDP 8E
May 1976	MOD (PE)	Malvern	Defence experimental work	CTL Modular 1
May 1976	MOD (PE)	Harefield	Analysis and storage of data	HP 21MX
May 1976	MOD (PE)	Pyestock	General scientific computing	ICL 1904A
May 1976	MOD (PE)	Pyestock	General scientific computing	DEC PDP 11/40
May 1976	Home Office	Horley	Allocation of frequencies for mobile and private radios	CDC 17
June 1976	MOD (Air)	Cranwell	General scientific and training	DEC 2040
June 1976	MOD (PE)	Aberporth	Data processing for trials	DEC PDP 15
August 1976	MOD (PE)	Farnborough	Program development and computer-aided design	DEC PDP 11/34
August 1976	MOD (PE)	Farnborough	Flight loading research	DEC GT44
September 1976	MOD (Navy)	Manadon	Speech processing and digital filtering	DEC PDP 11/10
October 1976	Environment	Garston	General scientific	ICL 1904S
January 1977	Home Office	Stafford	Police command and control system	Ferranti Argus 700E and 700S
February 1977	Transport	London	Data collection / analysis and other research projects	Prime 300
February 1977	MOD (Navy)	Greenwich	Scientific research and training support	Prime 400
February 1977	MOD (Army)	Woolwich	Storage and retrieval of management and scientific data	HP 2112A
March 1977	Home Office	Sandridge	Scientific applications	DEC PDP 11/34
March 1977	DAFS	Aberdeen	Fisheries research	DEC PDP 11/55
March 1977	MOD (PE)	Bedford	Runway lighting simulation	Honeywell DDP 716
March 1977	MOD (PE)	Chertsey	Data analysis and control	DG Nova 3/12

ACCEPTANCE DATE	DEPARTMENT[1]	LOCATION	MAIN USES	MANUFACTURER[2] AND TYPE OF COMPUTER
March 1977	Home Office	St. Albans	Development of scientific system	DEC PDP 11/34
March 1977	Transport	Crowthorne	Library and general scientific	2 × Prime 300
March 1977	MOD (PE)	Colchester	Research	Prime 300
May 1977	MOD (PE)	Waltham Abbey	Data processing and process control	HP 21 MX/E
June 1977	MOD (PE)	Chertsey	Analysis of vehicle suspension research data	DEC PDP 11/34
June 1977	Industry	Teddington	Numerical analysis	GEC 4070
July 1977	MOD (PE)	Porton	Data analysis	DEC PDP 11/34
August 1977	MOD (PE)	Farnborough	General scientific computing	DEC System 10
September 1977	Industry	Warren Spring	General scientific computing	ICL 1902T
October 1977	CSD	London	Microprocessor workshop	DEC 11F34AB
October 1977	Home Office	London	Fingerprint system	Prime 500
October 1977	MOD (Navy)	Haslar	General mathematical and scientific calculations	Prime 300
November 1977	CSD	London	Teaching system programming for BCS courses	DEC PDP 11/34

2B Computers for scientific and technical purposes on order as at 1st January, 1978

DATE OF ORDER	DEPARTMENT[1]	LOCATION	MAIN USES	MANUFACTURER[2] AND TYPE OF COMPUTER
December 1976	MOD (PE)	Farnborough	Scientific applications, signal processing	HP 2100A/15
January 1977	MOD (Navy)	Alverstoke	Gamma camera diagnostics and medical research	Varian V76
February 1977	MOD (Navy)	Teddington	Scientific research	ICL 2970
May 1977	Home Office	Staffordshire	Planning, co-ordinating and monitoring the utilization of police manpower	Ferranti Argus 700S

June 1977	MOD (PE)	Fort Halstead	Optical design and research	Varian 77-200
July 1977	MOD (Navy)	Alverstoke	Environmental medicine unit	DG Eclipse S/230
July 1977	MOD (PE)	Bedford	Graphics output	Tektronix 4051
August 1977	MOD (PE)	Farnborough	General scientific computing	DG Eclipse S/230
August 1977	MOD (PE)	Porton Down	General scientific computing	SEL 32/35
August 1977	Industry	Teddington	Acoustics research	Prime 300
August 1977	MOD (PE)	Greenwich	Simulation	EAL 600/32 (Hybrid)
September 1977	MOD (Air)	Upavon	Aircraft, troops and stores logistical deployment	ICL 2903
September 1977	Home Office	London	Deployment of command and control systems	GEC 4070
September 1977	MOD (PE)	Chertsey	Disc storage	ICL EDS 60
November 1977	MOD (PE)	Farnborough	Graphics	DEC PDP 11/34
November 1977	MOD (Navy)	Bath	Computer-aided ship design	DEC PDP 11/55
November 1977	DAFS	Aberdeen	Fishery research	DEC PDP 11/34
December 1977	Environment	Borehamwood	Transferring work to ICL 1904S at Garston	RC 3600 RJE
December 1977	Home Office	London	Portable traffic data collection	DEC PDP 11/03

[1] **Department Key** (*Column 2*)

CSD	Civil Service Department
DAFS	Department of Agriculture and Fisheries for Scotland
DES	Department of Education and Science
DHSS	Department of Health and Social Security
ECGD	Export Credits Guarantee Department
GRO (Scotland) ..	General Register Office (Scotland)
HO and Met. Pol. ..	Home Office and Metropolitan Police
MAFF	Ministry of Agriculture, Fisheries and Food
MOD (Air), (Army), (Central), (Navy), (PE)	Ministry of Defence (Air), (Army), (Central), (Navy), (Procurement Executive)
ODM	Ministry of Overseas Development
OPCS	Office of Population Censuses and Surveys
PGO	Paymaster General's Office
PWLB	Public Works Loan Board

[2] **Manufacturer Key** (*Column 5*)

BC(S)L	Business Computers (Systems) Ltd.
Burroughs	Burroughs Machines Ltd.
CDC	Control Data Corporation
CIL	Computer Instrumentation Ltd.
CMC	Computer Machinery Co. Ltd.
CTL	Computer Technology Ltd.
DEC	Digital Equipment Company (UK) Ltd.
DG	Data General Corporation
EAL	Electronic Associates Ltd.
Elliott	Elliott Bros. (London) Ltd.
Ferranti	Ferranti Ltd.
GEC	GEC Computers Ltd.
Honeywell	Honeywell Information Systems Ltd.
HP	Hewlett Packard Ltd.
IBM	International Business Machines (UK) Ltd.
ICL	International Computers Ltd.
Interdata	Interdata Corporation
Marconi	Marconi-Elliott Computer Systems Ltd.
MBM	Midlands Business Machines Ltd.
NCR	National Cash Register Co. Ltd.
Olivetti	British Olivetti Co. Ltd.
Philips	Philips Electrologica Ltd.
Prime	Prime Computers Ltd.
RC	Regnecentralen
Redifon	Redifon Computers Ltd.
RX	Rank Xerox Ltd.
SDS	Scientific Data Systems Inc.
SEL	Systems Engineering Laboratories
Tektronix	Tektronix (UK) Ltd.
Univac	Sperry Rand Ltd. (Univac Division)
Varian	Varian Associates
Ventek	Ventek Ltd.
Wang	Wang Electronics Ltd.

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The Civil Service

The General Sub-Committee of the House of Commons Expenditure Committee, under the chairmanship of Mr. Michael English, MP, recently conducted an inquiry into the efficiency and effectiveness of the Civil Service. This was the first review of the Civil Service by a Select Committee of the House of Commons since 1942, although, more recently, a comprehensive review of the structure, recruitment and management of the Civil Service was undertaken by the Fulton Committee. The acceptance of the Fulton Report (Cmnd. 3638) in 1968 resulted in a number of radical changes in the organization and management of the Service.

The Sub-Committee held 43 meetings, 28 to hear oral evidence from witnesses or groups of witnesses and 15 deliberative meetings, before their Report was agreed by the full Expenditure Committee. The Committee's Report, which was published on 14th September 1977 (HC 535), included a wide range of recommendations, 54 in all, 'designed to help the Civil Service to do a good job better'.

On 15th March 1978 the Government's observations on the Expenditure Committee's Report were published as a White Paper (Cmnd. 7117). The White Paper recognizes the value of the contribution of the Report to the further discussion of subjects which are of great importance to the Government, Parliament and the public; and welcomes the opportunity afforded by the Report to assess the way in which the Civil Service has developed since 1968. The Government note that this assessment has to reflect the long-standing objectives of Civil Service management: namely to promote efficiency and reduce administrative costs and to secure the co-operation of the staff in achieving this.

The White Paper is set out in the form of the Government's observations on each of the Committee's recommendations in turn. The early paragraphs cover the recommendations relating to recruitment, training, career management, pay, pensions and reducing costs by policy changes; and the concluding paragraphs those relating to incentives, relations with local government, Ministers and civil servants, and parliamentary surveillance. The White Paper as a whole is, of course, of concern to civil servants generally, but it is the centre section, which records the Government's observations on the Committee's recommendations which dealt with machinery of government, organization for efficiency, and monitoring efficiency, that is of particular interest to staff working in the management services and associated fields. Some such staff may not yet have had an opportunity to see the White Paper, and paragraphs 45 to 70 are therefore reproduced below.

Machinery of Government

Recommendation 24: *Splitting the Treasury by merging its public expenditure divisions with CSD would be an irresponsible act. Responsibility both for controlling all expenditure and for securing efficiency should be combined in the Treasury. Those parts of CSD concerned with the control of manpower and the efficiency of the Civil Service should be transferred to the Treasury, CSD retaining responsibility for personnel, appointments, recruitment, training, pay and pensions.*

Recommendation 35: *Ultimate responsibility for monitoring the control of efficiency should be vested in the Treasury.*

45. This is a question of the division of responsibilities between Ministers and is therefore a matter for the Prime Minister. He has considered this part of the Committee's Report very carefully. While he welcomes the emphasis which the relevant section of their Report places on efficiency, he has not yet reached any view on this particular recommendation and will therefore continue to study the issues involved.

Organization for efficiency

Recommendation 25: *Hiving off diminishes ministerial control and proper control mechanisms for hived off bodies should be developed.*

46. The Government agree that within the present constitutional framework most areas of government activity are unsuitable for hiving off; and that, where hiving off is possible, care has to be taken to strike a correct balance between the degree of freedom of action given to the new authority and the degree of control and answerability retained by Ministers.

47. In all recent cases where departmental functions have been hived off to new public bodies, and where new public bodies have been set up to take on a new activity, particular care has been taken to ensure that the appropriate degree of Ministerial control is set out in the enabling legislation (or other instrument) establishing the new body—e.g. the Employment and Training Act 1973, and the Health and Safety at Work, etc, Act 1976. Within the legal framework of Ministerial control powers, close attention is always given to the administrative mechanisms for determining the allocation of resources to the body concerned. It is also essential to monitor expenditure; arrangements for doing this are given close attention and will, if necessary, be strengthened. Here, too, there is a need to balance the maintenance of adequate Ministerial control with the degree of independent management action which the establishment of a separate non-Ministerial body is bound to imply.

Recommendation 26: *There should be a determined drive to introduce accountable units in all areas of executive work and, where possible, in administrative work. They should be scaled down to the size most conducive to effective control.*

Recommendation 27: *The advantages of a complete reconstruction of the present system of accounting to Parliament would outweigh the disadvantages. In particular, the accounts presented should correspond with the accountable units.*

48. The Government agree with the emphasis the Committee has put on accountability: the need to inculcate at every level of management a concern for clear objectives and priorities; the effective and economical control of resources; and the importance of monitoring and improving the levels of performance achieved with the resources over which the manager has control. Every manager should be accountable to his superior manager in this sense. Much has been achieved over the last 10 years, but there is still much to do. One of the most important aspects of this is the development of management information and accounting systems appropriate to each kind of work, i.e. systems to provide the necessary basis for sound decision-taking, effective control and the proper assessment of performance. In the absence of the common private sector yardstick of profitability, the development of these systems needs much care and uses up scarce skilled resources; further progress is unlikely to be fast. But the aim remains important and the Government will press ahead as fast as resources permit.

49. Accountable units are a special case of this general problem. They imply a form of organization in which a particular unit of management has a sufficiently discreet task to make it sensible to isolate it within the structure and give its manager both clear and measurable objectives and control over the resources needed to achieve them. The objectives of Government departments are complex and interrelated in a way and to an extent which limit the number of tasks to which this approach can successfully be applied, although the responsibilities of individual managers should always be established as clearly as possible. As with accountability itself, accountable units can be identified at a number of levels within an organization.

50. The Committee comments that the present system of Parliamentary accounting does not provide adequate management information. There is, however, a distinction between accounts presented for the purpose of financial control and audit, and information gathered for other managerial purposes. No single form of published accounts could provide all the information needed by management. Any attempt to expand the Supply Estimates to incorporate further information of this kind would risk making them unmanageable, and departments already publish a great deal of management related information in other forms. If the Committee considers that there are specific items of managerial information which Parliament needs in addition to those already published, the Government will be glad to consider the Committee's suggestions.

51. The Government note the Committee's view that the accounts presented to Parliament should correspond with accountable units.

The form of these accounts has been adapted and developed over time in response to views expressed by the House and its Select Committees. Major reforms in the structure of Parliamentary Estimates and Appropriation Accounts were made in 1973. Following these reforms, which the Expenditure Committee and the Public Accounts Committee welcomed, the Estimates have been presented primarily on a 'functional' or 'programme' basis, in line with the programme plans set out in the annual Public Expenditure White Papers. Major accountable units are shown separately in Parliamentary Accounts where possible. The Treasury are already reviewing the scope for assimilating cash limits and Estimates, and will take account of the views expressed by the Committee and by the Public Accounts Committee.

52. The Government have, in addition, set up trading funds, under the Trading Funds Act 1973, for PSA Supplies in the Property Services Agency, the Royal Mint and the Royal Ordnance Factories. Accounts for these funds are presented to Parliament. If it is desired to finance other quasi-commercial services through trading funds, the Government's intention will be to adapt the existing accounts, and/or present new accounts as necessary, to ensure that Parliament is kept fully informed.

Recommendation 28: *The Treasury in consultation with our General Sub-Committee should undertake research into the possibility of presenting analyses to Parliament showing the objectives of individual spending programmes and the results of past programmes.*

53. The Government have welcomed the contribution made by the Expenditure Committee in its Ninth Report for the Session 1976–77 (HC 466) in directing public attention to the objectives of selected expenditure programmes. In general, the Government have been able to comply with the Committee's recommendations that additional information should be provided in the Public Expenditure White Paper or in separate departmental papers. The Committee's recommendations were based on investigations of individual programme chapters of the White Paper by its General Sub-Committee and other Sub-Committees. The Committee said in that Report that its intention was, over a period of years, to examine most, if not all, programmes. The Government welcome that intention and consider that it offers an effective way of making progress in the direction proposed by the Committee in its Eleventh Report.

Recommendation 29: *Common services should be charged to Departments.*

54. In considering the case for charging any given common service to the departments which use it, the Government have to balance conflicting considerations. On the one hand, the user may have a greater incentive to economy if he has to pay for the service, although the strength of the incentive will depend upon the cost, and his ability to choose between suppliers and between expenditure on the common service

and other things. On the other hand, the allied service system, while allowing for the concentration of expert knowledge in one department, avoids the administrative and accounting costs of repayment.

55. A case-by-case examination of common services since 1972, carried out with a presumption in favour of repayment, has shown that the balance generally depends on the practical considerations relevant to each service. As stated in the Government's reply to the Committee's Ninth Report (Cmnd. 6971), the future basis on which HMSO provides goods and services is under review. As regards general office accommodation, the balance of advantage lies in favour of allied service, because it is most economical to have a system under which a single common service department can effectively manage the estate as a pool from which to meet the requirements of departments generally. As long as estate management decisions are taken centrally, there is no point in charging the costs of those decisions to the users. In some other cases, where these considerations do not apply, the Committee's objective has been met without the need for extra accounting by charging costs to the user department's public expenditure programme while leaving the cash provision on the common service department's vote. This has been done with specialized accommodation services and some services provided by HMSO and the Central Office of Information. The allocation of common service expenditure to user departments and to programmes is, of course, shown annually in Supporting Services Tables in the Supply Estimates.

56. The Government agree with the Committee that, in the absence of any financial constraint, there would be a risk that resources provided on an allied service, or indeed any other, basis would be used wastefully. But there are substantial constraints; the public expenditure provisions and the Estimates of the allied service departments are subject to scrutiny within the general arrangements for controlling public expenditure; there are controls on manpower and the location of user departments; there are maximum standards which are agreed centrally; and, where appropriate, there is the application of investment criteria and cost yardsticks.

57. The decision on HMSO goods and services will be reported to the Committee and to the Public Accounts Committee in due course. The balance of advantage as regards other services will also be reviewed as required by changing circumstances; the result of such reviews will similarly be made known.

> Recommendation 30: *Cost comparisons with the private sector should be normal practice in whatever areas of the Civil Service they are feasible.*

58. The Government agree in principle that the cost of Civil Service operations should be compared with the private sector wherever useful.

59. Operations can be divided for costing purposes between the provision of goods and services and between functional activities. Where goods are provided to customers who are not obliged to purchase from

Government organizations, it seems reasonable to assume that customers are satisfied with price, quality and delivery. Of the Trading Funds, both the Royal Ordnance Factories and the Royal Mint sell about half their output against international competition, while about half the sales under Property Services Agency Supplies contracts are made to buyers who could purchase elsewhere but are attracted by the price offered.

60. In providing other services, even where the function appears to be comparable with one performed in the private sector (e.g. employment placement), closer examination often reveals that there is no precise private sector analogue. The Government agency may, for instance, have different objectives; it may have little or no scope for selectivity in the fields in which it is required to operate; and it is generally required to give uniform and equitable treatment. These factors will all affect costs, and, consequently, cost comparisons with the private sector may be of limited value. Where such services are concerned, therefore, departments' efforts are best spent in concentrating directly on managing the task in question as effectively and economically as possible, while using cost comparisons where practicable for monitoring purposes.

61. The third area where costs may be compared is where activities such as procurement, printing, reprographics, building maintenance or transport are common to both the Civil Service and the private sector. In these cases, much is done as a matter of routine by way of examining tenders for contracts and by seeking any appropriate yardsticks. Thus, for example, it has been established that it is cheaper for the Government to use its own passenger cars than to enter into contract hire arrangements. Similarly, it has been found that specialized blocks of printing work can be produced more economically within Government printing works than by using contractual resources.

Monitoring efficiency

Recommendation 31: *We concur with the Government that effective cash limits should be fixed before pay negotiations are entered into.*

62. This recommendation does not correctly interpret the Government's statements about the relationship between cash limits and pay negotiations. The Government regard cash limits as a form of control over the amount of money to be spent on a wide range of goods and services in the year ahead, and not as a substitute for a pay policy in the public sector. However, when a policy governing pay is in operation, it is to be expected that the cash limits will reflect that policy and the Government have made it clear that the assumptions used for setting the 1978/79 cash limits will be framed accordingly. The relationship between the setting of cash limits and pay negotiations is a complex one, depending on the timing of the settlement and its operative date. Most cash limits are set shortly before the beginning of the financial

year so that account can be taken of the latest available information about the planned levels of expenditure and the prospects for prices in the year ahead.

Recommendation 32: *Cash limits should be reviewed in relation to the apparatus of Parliamentary control of expenditure.*

63. The Government agree that the relationship between cash limits and Parliament's role in granting Supply needs further consideration. The Select Committee on Procedure is reviewing this area of Parliamentary procedure among others. In their Third Report for the 1976/77 Session (HC 274) the Public Accounts Committee recommended that the Treasury should examine ways of assimilating cash limits with a reformed system of Parliamentary Estimates and Accounts. The Treasury, in consultation with other departments, is giving continuing consideration to the scope for assimilating the two systems in the light of the views which have been expressed.

Recommendation 33: *Cash blocks must be systematically broken down within the Department to coincide with accountable units.*

64. The Government welcome the Committee's endorsement of the principle that the size of cash blocks should provide scope for economical and effective management while preserving financial control. The Government agree that it is useful, within this broad control, to assign the responsibility for controlling expenditure to suitable units within the department, including accountable units in the sense used in the observations on Recommendations 26 and 27 above.

Recommendation 34: *Information on Departments' expenditure plans should be public, just as information on cash limits is.*

65. Information on annual expenditure plans is made public in the Estimates, the Chief Secretary's Memorandum and in some cases in other departmental publications. The cash limits, and the provisional out-turn in relation to those cash limits when the year is over, are published in White Papers. Any changes in the cash limits are announced during the year. Monitoring information on expenditure in the first six months of the financial year, together with the profile for the same period set at the beginning of the year, is now being published at the same time as the winter Supplementary Estimates.

(The response to Recommendation 35 is included above in paragraph 45.)

Recommendation 36: *Management services should be on the same basis as staff inspection, i.e. their entry into Departments should be compulsory though not their recommendations.*

66. In concentrating its attention on management services and staff inspection, the Committee has paid less attention to the CSD's Supply function. Contrary to the impression created by paragraph 115 of the

Report, CSD controls the estimates and cash limits for manpower and administrative expenditure, and to the extent that, as the Committee believes, cash control gives special leverage, CSD has that leverage and uses it. It is, however, an over-simplification to say (paragraph 122) that the central department responsible for the oversight of efficiency should have the power to enforce its proposals, whether these arise on matters within the responsibility of CSD or the Treasury, regardless of the views of the departmental Minister. Under our system of government, major disagreements between departments can only be settled by Ministers collectively. There is always, therefore, an element of shared decision-taking in central-departmental relationships.

67. The Government agree with the Committee, however, that strong and effective management services (MS) and staff inspection (SI) are necessary, both centrally and in departments. Both MS and SI have been greatly strengthened in recent years, and the Committee's Report tends to underestimate their effectiveness. Two important questions have been raised by the Committee: the authority of MS and SI staff and the best method of deploying them.

68. The Government agree that both functions should be staffed by officers of high quality, and that there should be recognized procedures for ensuring full consideration of their findings which should carry considerable weight. Attention should also be paid to full and speedy implementation once decisions have been taken after discussion with the Staff Side. The final decisions, where both SI and MS recommendations are concerned, lie with top management; and, in practice, the great majority of recommendations are implemented.

69. Central staff inspectors have a well-established and constantly exercised right of access to all departments as part of CSD's manpower control function. As regards central MS staff, the letter sent to every Accounting Officer when he takes up appointment says that CSD is responsible for 'the overall efficiency of the public service . . . for the development of management services throughout the public service; for taking the initiative in the introduction of new management techniques, and for keeping an oversight over the management practice in all the departments'. Consistent with this statement, central MS staff are never refused access to departments and the Government agree they should always have it. Apart from the management review programme, they have in practice operated mainly by invitation and agreement, but increasingly they too are used in support of manpower control. The Government will consider the scope for taking this development further. Departmental SI and MS units normally have access to the full range of departmental operations under the authority of the Principal Establishment Officer.

70. The best deployment of SI and MS units depends upon the job to be done. Recent improvements have produced a regular cyclical programme of SI aimed at covering the whole of the non-industrial Civil Service about every three years, using sampling methods in appro-

priate areas. MS looks more deeply at the underlying organization and methods of work, and a typical MS assignment takes longer than a staff inspection covering a corresponding area; it therefore is, and should be, more selective in its coverage, and it will often be profitable to deploy MS staff by agreement with, or at the suggestion of, the line manager concerned. Joint working between MS staff and staff inspectors can, however, be useful, and a joint approach is adopted where management problems call for it. Moreover, it is important, as the Committee implies, that staff inspectors and MS staff should be organized as a coherent arm of management, both centrally and departmentally, and should work in very close co-operation, by pooling experience and by alerting each other to problems which need attention, whether in joint or separate assignments. Current organization normally reflects this principle. There is, however, room for improvement in promoting co-operation and joint working; and the Government intend to pursue this.

Management Services handbooks

Readers may like to be reminded of the titles that are available in the Management Services Handbook series, published by CSD Management Services. They are:

E.125 *Typing services* (44 pages, price 45p)
E.130 *Forms control* (38 pages, price 60p)
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'Established 1917'—Time for a Change?

K. J. ECKERSLEY, Department of Health and Social Security

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1914–18 War: British casualties: killed 900,000; injured 2,100,000
1939–45 War: British casualties: killed 360,000; wounded 370,000

The Great War ended some 60 years ago and the conflict renewed in 1939 is now 30 years past but the aftermath of war is long lasting. In the Department of Health and Social Security at Blackpool an organization employing nearly 700 staff is responsible for administering the pension rights arising from these wars and from service in the armed forces from 1945 up to the present day. This article is about that organization, and more particularly about the changes it has had to undergo to adjust to the steady reduction in work loads occurring through the post-war years.

Synopsis of the War Pensions Scheme

The variety of claimants and pensioners covered by the Scheme is surprisingly wide. At one extreme are the casualties of wars long since past such as the Boer War, whilst at the other the outcome of current troubles in Northern Ireland. The two major wars, however, with casualties approaching four million have been the major source of compensation claims and the 400,000 pensions remaining in payment today mainly stem from these wars. Not just service personnel but men and women from all walks of life. The effects of modern warfare are far-reaching, involving heavy civilian casualties, merchant seamen, fishermen, firefighting services, Home Guard units and many more.

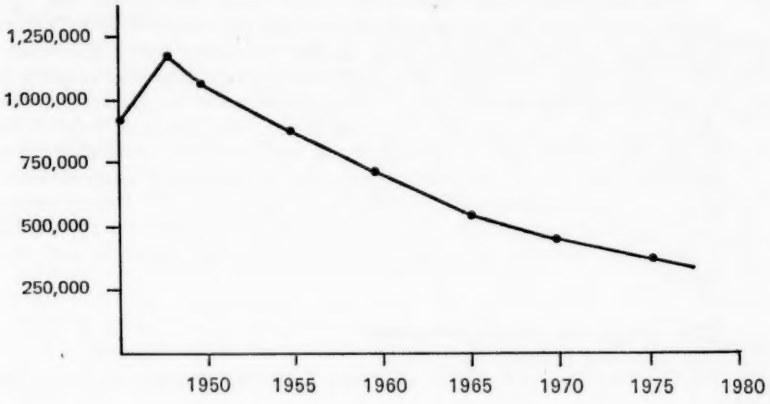
There is no satisfactory way of totally compensating for loss of limb, mental breakdown or long-term privation; no way of paying the nation's full debt to a widow or an orphan. Since Elizabethan times, however, financial compensation has been given to disabled soldiers and out of these small beginnings slowly emerged a scheme encompassing a wide range of benefits. Today, apart from the main pension for disablement or death, there is a variety of allowances to recognize the effect of disablement on employment and, more particularly, the additional burdens of very severe disablement. Apart from financial help, support is also given to pensioners by some 80 welfare officers based in local offices spread throughout the United Kingdom.

There is no time limit on a claim to war pension and the morning

post-bag can include letters from claimants linking current disablement with 'gassing on the Somme in 1916'; Arctic convoy runs in 1941; patrols in steaming Malayan jungles in the 1950s; or a bomb incident last week in Northern Ireland. This time scale can obviously make evidence collection to corroborate a claim difficult and decision-making on scanty evidence becomes problematical. What is often not realized is that the majority of pensions paid are for diseases rather than the wounds and injuries normally associated with war. From this it follows that a team of doctors—about 30 in all—play a major part in deciding claims, but over the years a system has developed in which clerical and executive staff are closely involved. This system has inevitably given rise to lay 'experts' so versed in medical matters that they have had honorary medical degrees jokingly conferred on them.

Development of the organization

Immediately after the major wars the number of claims to decide and pensions in payment was obviously very high and the organization developed to cope with this was deliberately specialized, being broken down into many self-contained groups. These reflected the differing procedures necessary to handle: 1914 or 1939 war claims; officer or other rank cases; Armed Service or civilian; disablement or death; and many more divisions. This permitted the quick training of staff on a narrow range of duties, the fast expansion of units to cope with heavy loads and the productivity to handle such loads. The approach was not wholly without problems but the volume of work justified it through the 1940s and 1950s. Gradually, however, the number of claims in some of the smaller specialized units ebbed away and even in the main areas became significantly reduced. The trend of the number of war pensions in payment shown in the graph below is indicative:



From this it will be seen that the pension payment load has dropped by more than 60 per cent from well over a million to some 400,000. More significantly, over a similar period the number of new claims in one of the main areas has dropped 75 per cent from 24,000 annually to 6,000. Inevitably as some of the groups became too small to stand alone they were merged but they were naturally loathe to lose their identity, the mergers tended to happen later rather than sooner and they occurred on an *ad hoc* basis rather than as part of an overall strategy. There was a growing realization that with diminished work loads the benefits of specialization may be outweighed by the problems created. Management consequently decided that a long-term plan for run-down over the next 10–15 years was called for, and in 1973 they asked O and M to examine this problem for them.

Problems of the specialized organization

The striking features of the organization were the marked degree of specialization already mentioned; the complexity of procedures built up over the years; the very detailed approach to considerative case work; the elevation of case work up the managerial tree; and the accelerating decline in customers. There was an important inter-relationship between these factors. Probably the most crucial factor was the declining work loads. The decline was naturally followed by staff reductions, but almost inevitably these were a step behind and spare capacity was, therefore, usually available in the units. The generous resources therefore permitted a comprehensive examination of cases ranging much wider than the issue raised by the customer. Laudable from one angle but sometimes causing delay, affecting productivity and occasionally even side-tracking from the main issue. The time spent on case consideration tended to expand into the time available, and as most war pension files are heavily documented the opportunity to get immersed in file re-examination is unlimited.

The specialized units also resulted in a significant proportion of files having to travel between groups to get a complete answer to a claimant's questions, and as a consequence no line manager was responsible for the total result. The viability of certain groups was also coming into question and a forecast of the declining work loads revealed more clearly the extent that this would affect the future organization. Lastly, more debatably, but in our view important, the resources available permitted a too uncritical response to pressures for increased sophistication in policy or procedures with insufficient regard to cost. Many pressure groups affect war pensions, claiming special treatment for special categories, and over the years the complexity of administration had grown steadily.

The proposed re-organization

The aim was mainly threefold:

(1) To improve the viability of groups by integration in a way that

would allow them to contract to meet the foreseen rundown of work.

(2) In achieving this, to move towards a position where the responsibility for the total processing of a pensioner's case lay with one manager.

(3) To change the emphasis on case work consideration by restricting attention more to the essential issues and, whilst retaining a good service, raising the emphasis on resource cost and productivity—this became colloquially known as 'degoldplating'.

(1) and (2) above were to be achieved by the full integration of groups whose activities were closely related and where the skills required were essentially similar; and by siting alongside these groups remaining units whose connection with the integrated group was positive but a little less strong. The main problem here was judging the span of work with which the staff could cope—they were obviously uneasy about the proposed expansion of their range of duties.

The change of emphasis on case work was equally important though less tangible to define but certain positive steps were advised to assist this. Small working parties were to be set up to try to streamline procedures and to question policies which were over-complex in application and costly to administer; the grading of case work was to be looked at to ensure that decisions were not pushed too far up the line; and more clearly defined guidelines were sought to focus the attention of staff on the pertinent issues in claims consideration. This is a very important question in an organization which receives a post-bag of 15,000 letters/forms a week, many of which are ill-defined in content.

Many other lesser measures were recommended, but generally speaking they supported the main aim of a faster, cleaner-cut processing system in which a claim passed between as few people as possible within one management area of responsibility.

Implementation

The most important task was to ensure that all members of the organization understood the reason for change and as far as possible agreed the direction chosen. Managers and staff were much consulted during the O and M exercise, the main report published in late 1973 was distributed for comment to all junior and middle management and a detailed synopsis was sent to every member of the staff. Finally, to ensure that all levels were aware of the commitment of senior management to the proposed changes, the Operation and Policy heads of the organization held a discussion meeting with line managers. All this helped, but no one would pretend that most of the apprehensions were removed. The organization had stood the test of time; it had always given a good service so why change it, was the inevitable response.

The synopsis of the report was also sent to the local staff associations and, following discussions in principle, agreement was reached to go

forward, each individual step in the plan being cleared with Staff Side as it arose.

A critical decision was that concerning the speed of implementation and all parties agreed that a step-by-step approach—try a stage, evaluate and go forward if satisfied—was called for, with oversight by a Steering Committee of senior managers. Complementary to this was the decision to leave staffing levels as they were to allow sufficient resources for training, and sufficient time thereafter for the staff on integrated groups to settle into their expanded role. This delayed the savings for a period but bore fruit in the longer term.

In advance of implementation were the 'simplification' working parties. These had moderate success in certain fields, but they found it was far easier for O and M to talk generally of simplification than it was to effect it. In practice it has proved difficult to achieve any radical simplification. To do so often means cutting across longstanding safeguards, or concessions awarded to minorities long ago, and these circumstances are hard to surmount. Much of the complexity remains, therefore, to hamper the intention to widen spans of work.

Three years on

In early 1977 O and M were asked to review the progress on implementation. The first main stages of integration in three different areas had been completed and the strong impression gained from managers and staff was of a favourable outcome. The widened work spans had been fairly easily digested and many fears dispelled. None of the work control 'performance indicators' showed any cause for concern in terms of work build-ups, processing delays, error rates or complaint levels. In some areas positive signs of improvement in some of these indicators were showing as the new groups settled down and confidence grew. The time taken to achieve the integrations was much slower than had been anticipated, but a lot of care had been taken with consultation, training and job instruction material. However, the objectives had been achieved and, what is more, there was the firm intention to proceed with the subsequent stages of implementation. Experience now suggests that progress will continue to be slow but that the Branch will get most if not all the way in the end. Progress has also been made on the casework front though this is harder to evaluate. However, there has been a significant degree of delegation and considerable debate and clarification on the standards to be aimed for in claims interpretation and processing. Much of this involves attitude changing in an organization with long-established traditions and can only be achieved gradually.

Though there is still much to do, significant gains have already emerged. These are varied, but I will mention two in particular—one concerning operational costs which nowadays are always in the forefront, and the other about morale. On cost the evidence now seems clear-cut that major resource savings have emerged—not from any one factor but from the combination of the whole re-approach. In the last

year most of the organization has been surveyed by staff inspectors and new staff complements agreed. Because of the steady decline in work loads in War Pensions Branch this exercise always produces savings, but there is no doubt that these have been far more significant since re-organization. We estimate that the savings run to more than 60 posts over and above the normal rundown expectations, valued at £200,000 plus annually. This has been achieved with the co-operation of staff, management and the local staff associations and does credit to all parties.

I end on the question of morale. I appreciate that this is a matter of judgement and that my 'specs' are, perhaps, a shade rose-tinted, but one gets the positive feeling that the challenge of re-organization has generated much re-interest and commitment in an organization that was quietly running down; and that the success now showing through has put some justified looks of satisfaction on the faces of the managers and staff who combined to achieve it. The organization has now lived for 60 years—it recently had a diamond jubilee celebration—and it is re-aligning its ranks for the next sixty. They say 'old soldiers never die, they only fade away'—so too, I suspect, the War Pensions Organization.

Some recently published titles

Labour force participation and development, by G. Standing. Published by the International Labour Office, Geneva, 267 pages, price 30 Swiss francs.

Work organization—Swedish experience and British context. Edited by D. Gregory. Published by the Social Science Research Council, 270 pages, price £2·50.

The managerial approach to tertiary education—A critical analysis, by B. Baron. Published by the University of London Institute of Education in their 'Studies in education' series, 103 pages, price £2·95.

An introduction to selection interviewing, by Dr. E. Anstey. Published by Her Majesty's Stationery Office, 39 pages, price £1·50. This pamphlet was commissioned by the Working Party on the Selection of Specialists and replaces the earlier pamphlet by Dr. Anstey entitled *The techniques of interviewing*.

Editor

Industrial Relations and Organization Change—The Italian Experience

Mrs. C. HOWARTH

Christine Howarth is a consultant working on studies in job satisfaction in CSD's Personnel Management 4 Division. Recently she has also been working in Italy where she met a number of managers, trade union officials and advisers involved in work on organization change. She found that their experience is in many ways relevant to our own situation. In the article that follows she expresses some personal views.
—*Editor.*

The relevance of Italian experience

Much attention has been paid in recent years to projects designed to change the way in which work is organized and to improve the quality of working life. Comparatively little is known about the part played in such projects by organized labour and its relations with management. Yet this has been important. In Scandinavia, for example, a tradition of management—union co-operation and 'industrial democracy'—has facilitated the widespread introduction of work of this kind. In contrast the major French unions' opposition to management initiatives has contributed to a comparative lack of activity in that country. The attitudes of British trade union officials have been so diverse that, while they may have been decisive in individual projects, no general pattern has emerged.

Nowhere has the role of industrial relations been more significant than in Italy. The Italian trade union movement's enthusiastic commitment to changes in work organization has been a major influence on both the nature of the changes and the means of achieving them. The three major unions,* which between them account for 99 per cent of union membership, regard organization change as an important issue and have formulated a common policy to achieve it. Unlike their Scandinavian counterparts, however, they cannot be regarded as 'co-operative', Their enthusiasm is derived from a radical interpretation of the role of organization change in Italian society, rather than from a desire for greater job satisfaction or higher wages. This motive often puts them at variance with management and the negotiations which determine the course of change tend to be fierce and complex.

Nevertheless, out of these negotiations have emerged programmes of change satisfactory to management as well as to the unions. It seems to me, therefore, that there is much to be learnt from the experience

of a country which is accustomed to conflict in industrial relations, but has still found it possible to achieve constructive results.

Progress in different sectors

In nearly every sector of the Italian economy there has been some activity in the field of organization change. Of course, it has been more marked in some sectors than in others, reflecting the differing degrees of pressure towards change.

Where pressures have been least obvious, as in the public sector, least progress has been made. However, there are reasons to believe that changes may be expected here also. The pressure of public dissatisfaction with the service given has recently been intensifying and, although it is too soon for its effects to be fully felt, the current trend of legislation is towards increasing government decentralization and public participation. It is unlikely that such developments can be accommodated without changing the organization of the service. The trade unions, for their part, particularly wish to encourage such change so that the 'social benefit' of the service can be increased. In addition they claim that civil servants themselves are frustrated by the limitations of present organization and job structures which both deprive them of job satisfaction and prevent them from responding adequately to the public's needs.

The impetus towards change has been greatest in the metal industries. Here management needed to adapt working methods in order to satisfy customer demand for goods which could not be manufactured economically by production lines. They also felt that staff dissatisfaction with tedious jobs which under-utilized their skills was a problem for their companies, not only because the dissatisfaction was disruptive, but because it represented a waste of resources. A further factor was pressure exerted by the trade unions who are particularly strongly organized in these industries. In some companies, managers instinctively reacted against such pressure and, as a result, underestimated the effects of employee dissatisfaction and the importance of commercial reasons for change. Such changes as were made tended to be superficial in content, limited in effect and resented by managers as concessions forced by the unions. However, where management were clearly aware of their own reasons for wanting change, trade union pressure could be coped with effectively.

What has taken place in the metal industries is important, not only in its own right, but because the policies and practices developed in that sector tend in time to be adopted, or at least to influence, other sectors of the Italian economy.

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* These unions, CGIL (Confederazione Generale Italiana del Lavoro), CISL (Confederazione Italiana Sindacati Lavoratori) and UIL (Unione Italiana Lavoratori), cover all sectors of Italian industry and commerce and are differentiated essentially on political lines.

The metal industries

The changes

Management in major companies in the metal industries have adapted working methods significantly. Their aims have been:

(*a*) To allow employees more scope to use their abilities and to acquire new skills which equip them for promotion to higher level work.
(*b*) To increase production workers' responsibility for and control over ancillary functions, such as training and quality control.
(*c*) To accommodate new technology and enhance the working conditions.

Taken together these changes create a new working environment. Employees have greater control over their working lives from day to day, and opportunities for career development are guaranteed to all those capable of advancement.

For example, Olivetti have moved from assembly on lines to assembly by groups of workers on fixed stations or islands. Day-to-day production scheduling, training and quality control are all left to team members, the supervisor providing any support for which the group asks. The aim is 'to bring back the skill and pride of the artisan'. At Italsider the need to introduce modern steel-making methods in a plant in Genoa provided the impetus for a process in which management, the trade unions and employees are working together to design the technological and organizational details of the new plant. All 900 workers involved are receiving special training to enable them to play a part in the design of the new plant as well as in its operation.

At Fiat, too, technological advances have stimulated changes in work organization. They have also been used to automate jobs which the company finds it is no longer economic or acceptable to ask people to do, either because they are tedious or because they endanger health.

The role of management

Although much of the pressure for change originates with the workforce, it usually takes the form of general demands for improvement rather than specific proposals. In practice, the initiative for introducing new methods is almost invariably taken by management, who typically draw up and put forward plans, which then become the subject of bargaining with trade unions and other workers' representatives. Whilst this is the general pattern, there are examples of a more participative approach, the most significant being the recent work at Italsider. Here the areas, goals and forms of experimentation are now decided through joint management/trade union steering committees and working groups. The pay and grading implications of the agreed changes are subject to collective bargaining as elsewhere.

The role of the trade unions

The reluctance of trade unions to contribute proposals of their own

reflects the Marxist philosophy of the largest union, CGIL. This precludes them from participating in any 'co-determination' of the type favoured by the Scandinavian and German unions. As a leading trade unionist put it, the Italian unions 'prefer to experiment with forms of workers' control through many channels . . . not through representative committees, but through the negotiation process'. This, they feel, gives the workers greater influence, especially over 'complex issues such as investment'. In practice, said one senior manager, the effect is that 'the Italian labour movement has only one way of tackling problems and that is conflict. The moment they accept joint management they would be accepting a system they always say they want to change.' However, in view of the central position of organization change in their strategy, the normal response of trade unions to management initiatives is not simply to oppose, but to attempt to channel them towards their own ends.

Organization change thus proceeds through negotiation; both trade unions and management want it, but bargain fiercely over the practical details, since each wants it as a means to different ends.

The role of advisers

Advisers work with both management and unions, helping each side to understand the other's interests and to resolve the conflicts which inevitably arise. These advisers do not participate in the bargaining process itself which is entirely the province of management and union representatives. The advisers I met all felt that it was important for those affected by changes to play a part in devising them and saw their own role as that of facilitating this involvement. For instance, they have helped managers and union officials work together on joint steering groups and working parties, enabling both sides to see where it was appropriate to stand back and allow the staff involved to play their part.

The results

Both sides constantly review the extent to which their different aims are being achieved. As always in work of this kind evaluation presents difficulties. Traditional measures have proved inadequate not only for the assessment of intangible benefits, but often also for the tangible. Where measurement was possible management in all the companies concerned could identify specific economic benefits which outweighed the costs. In addition they found that the new methods offered other benefits such as production flexibility, a more highly skilled workforce and improved staff morale. Finally the companies' main fear—that one result would be a disproportionate escalation of wage costs—has not been realized. Although they did find that wage costs had risen, they regarded this as no more than the just recognition of the higher skills and greater flexibility of the workforce.

The unions also rely to a great extent on their judgement in assessing results. Although plant level officials would count the benefits primarily

in terms of improved pay, conditions and career opportunities, national officials tend to see the results more in the context of long-term socio-political change. For them the most important gain has been the increase in the influence of workers over their working methods and environment. Senior Italian union officials see this as the 'starting point of their whole strategy' and 'the key by which the individual can understand and criticize the general situation'. From this they believe that the workers will ultimately arrive at 'a political strategy for the development of their country'.

The problems

Although both sides feel they are advancing towards their objectives, they have both encountered problems of adjustment. It has not always been easy for staff to adapt to team working, although with training, support and experience these problems have usually been overcome. Likewise some managers have found it difficult to adapt, particularly at lower and middle levels where the changes in role were most profound. And, just as management were apprehensive about delegating decisions to the workforce, so were some full-time trade union officials. Usually the problem was found to be closely related to the extent of the involvement, with fears diminishing as practical experience grew. Some of the advisers I spoke to also identified problems peculiar to the trade unions. Some officials saw the changes as a 'socio-psychological management trick to get the workers to fight the unions' and feared a 'loss of control' by the unions and an unacceptable 'integration of workers with management'. The important point seems to be that neither side regards these problems as sufficiently significant to alter their resolve to go ahead.

Prospects for the public sector

No equivalent projects have yet taken place in the public sector, though, as suggested above, some such activity may be expected. As yet management have only taken the initiative in limited areas, such as training. From their point of view there are difficulties in going further since administrative control is highly centralized, leaving managers little discretion in decision-making and negotiation.

Moreover, some feel that management have not yet come to understand the urgency of the pressures for change. For instance, they do not fully appreciate that the traditionally low expectations that Italians have of their public service seem to be changing. Similarly they apparently underestimate the significance of recent changes in public sector trade unionism.

Until recently concerted trade union action in the public sector was rare due to the existence of numerous 'autonomous unions' which represented small, special-interest groups and which bargained autonomously on traditional subjects, ignoring the wider socio-political issues which concern the three major unions. However, recently public

sector membership of these three unions has been growing to the point where it is now as high as elsewhere.

The concerted strategy for the public sector of the three major unions includes strengthening collective bargaining structures and extending their scope (particularly at local level where they are weakest and most limited) so that arrangements in the public sector correspond with those in the private sector. They are also pressing, in conjunction with left-wing political parties, for further legislation designed to decentralize government administration and increase public participation at local level. With these changes as a basis, the unions want to see 'new forms of public accountability' which will make civil servants 'more directly responsible to the local public'. They also feel that increased administrative flexibility is essential if public service is to be improved. To achieve this they would like to see 'autonomous teams' of civil servants created to deal with specific problems as they arise and able to operate across established departmental boundaries.

Of course, as the unions themselves admit, such a strategy is a long way from being realized. In the words of one national official, it is a matter of 'working towards a different image of social organization which isn't yet defined'. Indeed it is also recognized, both by union officials and others, that the introduction of change into the public sector will be a delicate and complex process. Nevertheless, 'the issue is on the table' and, combined with growing public dissatisfaction with the quality of service and the spontaneous efforts of civil servants to improve both their own job satisfaction and the service they give, the result is pressure for change that must be taken into account by management.

The significance of the Italian approach

Although the situation in our own Civil Service is in many ways different from that in Italy, management here are having to cope with similar pressures. The British public, encouraged by the media and pressure groups, have come to expect an increasingly effective and responsive service. Moreover, there is now political commitment, which is not evident in Italy, to improving the efficiency of the public service. Civil servants themselves are sensitive about the quality of service they provide and are less willing than before to perform routine tasks unquestioningly. The Civil Service trade unions are becoming more assertive and behaving more like their counterparts outside. Even though British trade unions do not at present have strategies on organization change as comprehensive or as politically motivated as those of the Italians, they are beginning to feel that the interests of their members require the formulation of such policies—and clearly in some unions political motivation will not be absent.

Whilst it is not practicable to transplant solutions from one culture to another, it is possible to learn by considering the approaches others have made to similar problems. Management in significant companies

in the Italian metal industries, faced with pressures for change from customers, staff and highly organized, politically-motivated trade unions have been able to devise, negotiate and implement changes which have proved satisfactory to all parties concerned. Where such benefits have been achieved the following factors seem to have played an important part:

(*a*) Management were convinced of the operational importance of responding to changing customer and staff needs.

(*b*) Both management and union officials felt that the problems which could result from resisting change would be greater than the problems involved in making changes: therefore both sides acted positively when difficulties arose.

(*c*) Employees were involved in various ways in determining the changes, in some cases directly, in others through steering groups, working parties and other forms of representation.

(*d*) Changes in work organization are covered by national and local agreements. When changes lead to higher skills being required, higher pay can be negotiated. Thus both management and unions have a clear framework for discussion and for developing their own strategies.

(*e*) In assessing progress both sides applied quantitative measures where possible and were trying to develop new ones, but they felt that it was neither possible nor desirable to rely exclusively on measurement. They found they also had to rely on their judgement and the reaction of those involved in order to assess some of the important outcomes.

In conclusion, the most significant lesson to emerge from the Italian experience is this: that it is not necessary to agree about aims in order to make progress. Management in the Italian metal-working industries distrust the unions' political motivation. The unions distrust what they see as management's preoccupation with profit and productivity. But neither side has allowed its distrust to stand in the way of coming to terms with the other, and the results have been useful to both.

Central Management Services in the Ministry of Defence

J. BALFOUR, Ministry of Defence

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Introduction

The purpose of this article is to describe the position and work of central Management Services in the Ministry of Defence. It is concerned mainly with the 'steam' O and M divisions; ADP and work study are organized separately and are not discussed here. Future editions of this journal will include articles on some of the more interesting MS assignments which have recently been undertaken in MOD; this article is intended to be an introduction to MOD's central MS organization.

First of all a little about MOD itself. It is a highly complex and wide-ranging organization. It consists of five main elements (the Central, Navy, Army and Air Force staffs and the Procurement Executive) which trace their origins back to five separate Ministries. There are a variety of senior managers/Ministerial advisers, led on the civil side by the Permanent Secretary, whose staff are in all five of the main areas and help to provide the necessary overall cohesion. Excluding Ministers, other leading figures are the Chief of Defence Staff, the Chief Scientific Adviser, the Chief of Defence Procurement and the single-Service Chiefs of Staff.

The Ministry has many roles. It is a Department of State, an operational headquarters, the management authority for 600,000 people (service and civilian), a very large buying organization (some £2·5 billion a year), a major exporter, an industrial manufacturer, a storekeeper and a landowner, and it represents the largest concentration of research and development in the country. One could go on much longer. With such a wide spectrum of activity there is a considerable and varied demand for management services.

Organization of Management Services

Each of the uniformed Services has an MS branch for use outside MOD headquarters and some individual formations, such as RAF Strike Command and the Royal Army Ordnance Corps, also have a local MS capability, as do the large civilian manned executive areas in the

field, e.g. the Royal Naval Supply and Transport Service. These non-central MS authorities exist to provide advice to management in their particular areas and so tend to be 'specialist' in so far as the ambit of their activities is functionally defined. There are two central O and M divisions at present: Management Services Divisions 1 and 2 (Man S1 and Man S2). Because their origins were separate they are considered separately in this article, although in fact they merged into a single MS organization in April 1978. A committee exists to provide the necessary programme co-ordination between the main MS units and as a forum for general discussion and the exchange of ideas.

Formally the parish of Man S1 is MOD headquarters, although the division is often invited to undertake assignments outside headquarters; and Man S2 covers the whole of the Procurement Executive, which includes the R and D establishments. As regards staff, the two divisions are both headed at Assistant Secretary level and contain together some 30 civilian assignment officers at SEO and HEO level and a few Service officers. All these staff have been specially trained in O and M, and a number also have specialist skills. The amalgamation of the two divisions will be particularly helpful in increasing flexibility in the deployment of assignment officers and allowing the development of specialist O and M skills in particular management fields.

Constitutional position

The Man S divisions are part of the Permanent Secretary's staff. They come under the direct control of the Assistant Under-Secretary for Civilian Management (Organization) (AUS(CM)(Org)), who also has responsibilities for the Ministry's staff inspection and complementing divisions and is one of five AUSs reporting to the Deputy Under-Secretary for Civilian Management (DUS(CM)), the Principal Establishment Officer of MOD. The Principal Establishment Officer has responsibilities to all the Ministry's Accounting Officers, and to the Permanent Secretary in particular, for organizational efficiency.

Philosophy

Both the central management services and staff inspection divisions are concerned with efficient use of resources. However, their focus and, in the circumstances and complexity of the Ministry of Defence, their posture are rather different. Staff inspection is concerned directly with the most efficient use of manpower resources and has an important audit function in relating numbers and grades of staff to the workload. The aim of central MS is rather broader, covering not just staff aspects but the whole gamut of matters organizational and procedural. MS is an arm of top management, and the Permanent Secretary in particular. It is, therefore, quite proper and sometimes necessary for top management to direct that a study be made by MS. But more frequently an MS team enters an area by invitation of the line manager or senior officer concerned, who wishes to draw on their advice and

assistance. In this it differs from the cyclical and audit nature of staff inspection. Indeed, for the sort of in-depth study we undertake it is very important to have the co-operation of those directly affected. In any case the line manager bears immediate organizational responsibility for his own area and it is most often he who identifies the problem in the first place and calls in MS.

This philosophy is also demonstrated in the status of our reports. In Man S our recommendations are in themselves purely advisory. They can be disregarded by the sponsor of the study or by senior management in the Department if they are found to be unconvincing. We have to rely for our effectiveness on accuracy and good argument, persuading those responsible for considering them that our recommendations should be implemented. We do run a check, initially six months after the submission of each report, to see how its implementation is going. This is mainly intended to help us to gauge our own effectiveness, but if we thought that a really worth-while recommendation had been disregarded by line management on bad grounds, it would be open to us, as part of the Permanent Secretary's staff, to bring appropriate pressure to bear.

Assignment work of central MS

In central MS, our assignments tend to be organizational, whether at section, division or directorate level, or concerned with the methodology of a task; in other words, pure O and M. Although, as already mentioned, we tend to work mainly in MOD headquarters, we will be asked quite frequently to go outside, often to deal with an assignment which has a tri-Service or global flavour. Indeed, we find that we can be particularly useful in assignments which cross line manager boundaries and in helping to introduce into all three Services the best of the different systems used by each individually. We also often look for lessons to be learnt from similar organizations outside MOD. In terms of content, in keeping with the vast range of activities of the Ministry, the variety of assignments undertaken by central MS is considerable.

Recently a fair amount of the work of central MS has been directed towards follow-up to the Ministry of Defence Management Review (see *MSIG*, Volume 32, Number 3, August 1977, pp 128–133*). At the same time, however, the aim has been as far as possible to maintain, or perhaps even improve, standards of service and efficiency where important tasks are concerned. Economy, however, is by no means the sole focus and to illustrate the range of work which central MS carries out the following is a selected list of recent and current assignments.

Stocktaking in major depots. This study is looking at the various stocktaking procedures used at major depots throughout MOD with a view to common standards where these might be applicable. It has involved consideration of the feasibility of statistical sampling methods and the

* 'The Management Review Programme' by S. D. Walker.

implications for efficiency and cost and involved comparisons with other organizations, including military depots in the United States.

Hospital administration. This study, which is still in progress, was commissioned to look into administrative, as opposed to medical, tasks in Services hospitals. This has required comparisons to be made between different Service hospitals and with NHS hospitals. A representative of the NHS has been attached to the assignment team.

Mechanical document handling system for Cardiff. This was an assignment into the feasibility and cost-effectiveness of introducing a mechanical document delivery service in MOD's dispersal site at Cardiff. While no scheme was found to be acceptable in this particular instance much was learnt about possible techniques which could be useful in the future.

Special and made-to-measure clothing for servicemen. This study, which has been the source of several amusing and scarcely credible anatomical stories, is aimed at rationalizing the procedures for the provision of uniforms for servicemen who are in the tails of the normal distribution curves for size and shape.

Design of packaging. A comprehensive review embracing both the organizational framework and the basic procedures for the design of packaging for almost the whole range of MOD (Service and PE) stores.

Disposal of surplus stores. This assignment has involved an examination of the extent to which the task of disposing of material surplus to MOD requirements and scattered in various places can be achieved more economically.

Defence estate. This followed on from a recommendation of MOD's management review. It made recommendations to help central co-ordination of land and property usage in the defence field. The assignment, in turn, has spawned other studies into particular aspects of the organization, for example, the arrangements for keeping central records.

Teachers' administration. We have recently been asked to look at the organization and system for the recruitment and management of teachers for Service children's schools, now that, as a result of overseas withdrawals, nearly all of these are in Germany.

Project network for MOD dispersal to Cardiff. This is aimed at identifying and interrelating the multitude of decisions and activities (900 have been identified to date) required to meet MOD's Cardiff dispersal commitment on time. The resulting project network will provide management with an essential tool for the co-ordination and control of this highly complex operation.

In addition to these and many other O and M assignments, several odd jobs have, over the years, found their way into central MS. Thus,

apart from our assignments staff we have sections with particular functions. These include the Standard Language Authority (not an anglophone *Académie Française*, but concerned with the standardization, both nationally and within NATO, of military technical terms), the MOD forms design and control section and the non-technical staff suggestions scheme.

This has been a fairly rapid *tour d'horizon* of MOD management services. I hope that its brevity has not resulted in obscurity, for MOD is a particularly complex organization, and not easily summarized. Our view of ourselves in MS is that, although we are only a small part of a very large machine, we are encouraged in the view that the role we carry out has some importance by the wide and regular use made of central Management Services in so many areas of the Ministry.

The subject of Bridget Howard's regular contribution 'Management Bookshelf' in this edition (page 95) is microcopying. A selection of articles on microcopying which have appeared in *MSIG* is now available from the Editor, price £1·50, to persons and organizations outside the Civil Service. The selection comprises:

'Systems design—with microcopying in mind', by B. J. Terry and P. V. Wood.

'Why paper? A study in publishing with microfilm', by Sqdn. Ldr. J. J. Simmonds.

'Putting the Companies Registration Office on microfilm', by P. Allwood.

'Use of microfiche for periodical literature', by J. F. G. Burton.

'Use of microfilm in an Accounts Division', by M. H. Woods.

'Microfilming in the Valuation Office', by T. R. Peckham and R. Brooks.

The Work of the Medical Advisory Service

Dr. A. B. HARRINGTON, Civil Service Department

Dr. A. B. Harrington, MD, FFCM, is the Medical Adviser and heads the Medical Advisory Service (MAS) in CSD. In the article that follows he describes some of the work of MAS, which, among its other functions, provides an occupational medical service specifically concerned with the health and efficiency of civil servants in their working environment. —*Editor.*

Background

The Civil Service has sought advice from doctors concerning the health of staff since the eighteenth century. However, the whole-time medical advisory service was not instituted until 1948 when the Treasury Medical Service was set up. Its duties were to review the health of Home civil servants on prolonged sick leave, advise retirement if appropriate and complete the required retiring certificate. Since then the work has widened in two ways: it now includes those in para-governmental bodies together with members of the Foreign and Commonwealth Office and related overseas services with their families; and it now involves MAS in many aspects of personnel management in the Service.

MAS activities have developed by working more closely with Establishment Divisions and, in recent years, the organization of special surveys of the health of civil servants.

Organization

The Headquarters organization comprises the Medical Adviser, his staff of one Principal Medical Officer, four Senior Medical Officers, three Medical Officers, three nurses and a radiographer and supporting office staff at Tilbury House, Petty France, London. There are full-time doctors covering four divisions of the United Kingdom at Edinburgh, Cardiff, Manchester and Leeds. Additionally there are about 2,000 (part-time) Local Medical Officers throughout the country. These are usually specially selected general practitioners who carry out examinations at the request of MAS on the health of civil servants resident in their area.

Work of MAS

Each doctor at Headquarters is responsible for the supervision of specified departments. They visit Establishment Divisions of these departments regularly to advise on the medical aspects of personnel problems.

Because relatively few doctors are involved, working closely together, equivalent criteria and standards can be applied to health throughout all government departments. However, this must ultimately depend on Management who make the references for our opinion.

Casework

Advice is given to the Civil Service Commission about the health of candidates for appointment to the Civil Service and on other medical aspects of recruitment. A survey of the outcome of unestablished appointments on 'health doubt' terms is now being undertaken.

Establishment Divisions refer cases of prolonged or frequent sickness absence to MAS for an opinion about the likely duration of sick leave and the prospects of the person being able to give effective service in future. Following a medical examination, or after receiving a report from the general practitioner, advice is given to departments as to any modification of duties or of hours that might be helpful after return to work. Sometimes a transfer to a different location or type of work will relieve stress and prevent chronic ill-health. If there is little prospect of further useful service, retirement on medical grounds may be advised in the best interests of the person and the department. This is only suggested after careful assessment over a period of time of medical reports from various doctors. The views of the person concerned about his future at work will also, of course, have been obtained.

Since 1972 there has been a reduction in routine referral of sickness absence cases according to Regulations. Departments may refer a case at any time if there is concern that, despite no significant sickness absence, a person's work or behaviour might be adversely affected by mental or physical ill-health, possibly resulting in poor discipline or risk to colleagues or to the public. Inefficiency or unco-operative behaviour may be an early indication of ill-health. It may also be the result of stress developing in an office. By early reference to MAS, an alert Manager, interested in his staff's welfare, may prevent prolonged sickness absence and other disruption of the work of his office.

Work for departments with staff serving overseas

For departments with posts overseas, advice is given on the fitness of staff and their families to travel and reside anywhere in the world, or whether any limitations of geographical location are desirable. Medical examinations are arranged when necessary for younger people. For those over the age of 40 periodic detailed examinations are carried out at our headquarters. Protection against health hazards overseas is provided by immunization and advice, and arrangements are made for suitable medical care for members of British Missions abroad. If serious illness occurs, return to the United Kingdom may be necessary and help is given both for the journey and by arranging treatment or hospital admission on arrival here. Overseas posts are inspected to determine the health conditions and standards of available medical care.

Specific health hazards

Increasingly the advice of MAS is being sought in the field of specific health hazards. Those working in industrial and research establishments or on other work where they may be exposed to health hazards are regularly examined as required by Health and Safety regulations to protect their health. Chemical hazards, vibration from chain saws, hearing loss in radio officers and problems arising from the use of lasers or exposure to radiation are some of the conditions that have been studied.

The use of visual display units has provoked anxiety about possible risks to eyesight or the development of troublesome general symptoms after their prolonged use. International studies have shown that visual damage does not occur but operator discomfort can be caused by badly sited equipment, using characters that are too small or blurred, in adverse lighting conditions. An existing minimal visual defect, of which the operator was previously unaware, might be revealed in these circumstances. Detailed vision surveys have therefore been made by MAS in departments who are major users of VDUs, and we are now able to give expert advice in their introduction.

Problems arising about the working environment have also been investigated. An example is the risk of poor ventilation in port buildings causing slight carbon monoxide poisoning. At present a survey is being made of health related to working in air-conditioned offices compared with those with natural ventilation.

Research projects

Since 1968 MAS has undertaken research into the causes of sickness in the Civil Service, carried out with the help of colleagues in university and clinical departments. The first studies were in the field of heart disease, which is an important cause of sickness absence in male civil servants. This work was published in medical journals and is frequently quoted by lecturers in epidemiology. Research workers are appreciative of the helpful, informed and stable population provided by civil servants.

A major project commencing in 1975 was the 'London Survey'. This is continuing and involves the survey of the health of 70,000 London-based civil servants, with particular reference to cardiovascular disease, bronchitis, peptic ulcer, alcohol dependence and breast cancer. Those whose response to a questionnaire suggests they are at undue risk of illness are being examined and further tests are being made. Advice is being given about ways of improving health and the follow-up will continue to try and assess whether medical intervention does reduce the risk of subsequent disease. Unfortunately the response rate is lower than anticipated at first but we are trying to improve it. It is probable that this study will contribute to medical knowledge generally about the value of screening surveys in the early detection of disease.

Based on experience gained in the London Survey, a further similar

but much shorter study was undertaken in Manchester last autumn. This included much of the scope of the London Survey but also specifically investigated the prevalence of backache (which is a major cause of sick absence in many different employments). It offered treatment for some cases by the orthopaedic department which assisted in the study; but as a deliberate part of the study, a control group is not being treated. Some 530 civil servants in Inland Revenue working at Albert Bridge House, Manchester, were given the opportunity to participate and the response rate was a gratifying 76 per cent—much better than has been obtained so far in the London Survey. On this occasion we had asked the Staff Side for their help and we believe the better response was due at least in part to their ready response. Thirty per cent of those examined were found to have a history of backache. The prevalence of other previously undiagnosed conditions was similar to that found in London except for a greater incidence of respiratory disorder.

As a result of the survey an expert assessment will be made of the office furniture in Albert Bridge House, and MAS is liaising with the Property Services Agency in evaluating the design of new office furniture.

Since 1972 MAS has offered a confidential health check to those entering the Open Structure (i.e. the highest levels of responsibility in the Service) and is now starting to recall them in order to monitor any changes in their health. There is no evidence so far that greater responsibility impairs health—if anything the reverse might be suggested, though there are other factors which may well have a bearing (the top ranks of the Service include fewer smokers than most other groups, for instance).

Education in prevention

Using our experience based on our own surveys and those conducted with our help by university and other departments, we play an important and increasing part in education and training. Doctors are now taking part in seminars in the Civil Service College on health subjects, especially those concerned in prevention. They give lectures to training courses for Welfare Officers and speak in pre-retirement courses for civil servants.

With the Health Education Council, Welfare and the Staff Side we are encouraging people to keep fit, abandon smoking and be judicious in the use of alcohol.

We hope to study the causes of stress-induced illness which seems to be increasing. In this way we should benefit both those employed and Management.

Continuing education for MAS staff

At a time of rapid progress and change in concepts of health care a programme of continuing education has been adopted by doctors and nurses and others in the Medical Advisory Service.

We aim to maintain clinical standards, for we have on occasion to provide emergency treatment as well as give the more routine medical assessments. We reckon to see that someone with appropriate professional skills is on hand whenever we have large and important Government conferences in London.

We are developing our skills in occupational medicine by attendance at courses and seminars held by the Employment Medical Advisory Service, the Royal College of Physicians and university departments. We also have a close liaison with the Medical Services of the Department of Health and Social Security, the Post Office and the Procurement Executive of the Ministry of Defence. Wherever necessary we draw on their expertise and that of the Medical Branches of the Armed Services, from whom we enjoy useful and cordial co-operation in times of need.

In summary

The future of the Civil Service Medical Advisory Service will involve our working ever more closely with Management and the Staff Side to help people in the Service become healthier and more efficient. In practice this will mean a much greater emphasis on all aspects of occupational health in MAS's task.

Is your writing all right?

A senior officer of my acquaintance was approached by the Supervisor of Typists who asked if she could have some of his old drafts. Flattered, he asked why they were required and she explained that she wished to give some new typists practice in reading atrocious handwriting. Instead of feeling humiliated, he used to boast of this incident.

Unfortunately, he is not alone and there are too many people with poor handwriting who expect typists to interpret their drafts and their colleagues to suffer the frustration of trying to decipher what has been written. The result is a waste of time.

Could I plead that we should all try and make our handwriting clear and readable?

The above was contributed by Mr. A.B. Rees of Department of Health and Social Security, and was written freehand with a fountain pen using an italic nib. - Editor.

Machinery of Government in the United Kingdom

Main changes during 1977

Structure of Government

The size of the Government

The total number of Ministers in the Government at the end of 1977 was 109, a decrease of one since the beginning of the year. In the same period the number of Ministers in the Cabinet rose from 23 to 24.

Ministerial changes

Following the death of Mr. Anthony Crosland in February 1977, Dr. David Owen, who was Minister of State at the Foreign and Commonwealth Office, became Secretary of State for Foreign and Commonwealth Affairs and Minister of Overseas Development. At the same time Mr. Frank Judd was appointed Minister of State at the Foreign and Commonwealth Office. His previous post as Minister of State for Overseas Development was filled by Mrs. Judith Hart.

The Chief Secretary to the Treasury, Mr. Joel Barnett, became a member of the Cabinet in February 1977.

In January, Mr. John Tomlinson, the Parliamentary Under Secretary of State at the Foreign and Commonwealth Office, became also Parliamentary Secretary at the Ministry of Overseas Development.

Also in January, Lord Jacques resigned as a Lord-in-Waiting and was succeeded, at the end of February, by Lord Wallace of Coslany. Mr. Thomas Pendry resigned as a Whip in January. His place was taken by Mr. Thomas Cox who was promoted from Assistant Whip. Mrs. Ann Taylor was appointed Assistant Whip.

In November the resignations took place of a Whip, Mr. David Stoddart, and an Assistant Whip, Mr. Joseph Ashton. They were succeeded by Mr. Peter Snape as Whip, promoted from Assistant Whip, and Mr. James Marshall as Assistant Whip. One post of Assistant Whip remained unfilled at the end of the year.

Transfers of functions between Ministers

During 1977 there were no Transfer of Functions Orders under the Ministers of the Crown Act 1975, but several changes were effected administratively and some others were announced which will require Transfer of Functions Orders in 1978.

The following are the changes which took place in 1977:

(*a*) On 4th March 1977 functional responsibility for sponsorship of

proprietary medicines was transferred from the Department of Industry to the Department of Health and Social Security, because it was felt that it would be in the best interests of the pharmaceutical production industry as a whole to have a common sponsorship for all its products.

(*b*) On 1st April responsibility for the defence activities of Millbank Technical Services Limited, a wholly-owned subsidiary of the Crown Agents, was transferred from the Minister of Overseas Development to the Secretary of State for Defence. The Minister of Overseas Development retains responsibility, through the Crown Agents, for the remaining non-defence activities of MTS.

(*c*) Also on 1st April, responsibility in England and Wales for the functions exercised by the Home Secretary under the Protection of Birds Acts 1954 to 1976 was transferred to the Secretary of State for the Environment. This followed a review of departmental responsibilities in this area and was effected in view of the Secretary of State for the Environment's responsibilities for the administration of similar legislation affecting wildlife and its conservation.

(*d*) On 13th June responsibility for the urban programme was transferred from the Home Secretary, in England to the Secretary of State for the Environment and in Wales to the Secretary of State for Wales, because the programme's expansion would mean that there would be room in it for measures going beyond specifically social projects. The Home Secretary retains the central responsibility for the Government's race relations policies and for the statutory provision for grants to be made to local authorities which have within their areas substantial numbers of Commonwealth immigrants.

(*e*) On 1st July responsibility in Scotland and Wales for the activities of the Manpower Services Commission and its executive arms, the Employment Service Agency and the Training Services Agency, was transferred from the Secretary of State for Employment to the Secretaries of State for Scotland and Wales. This followed the 1975 White Paper *Our Changing Democracy: Devolution to Scotland and Wales* and the subsequent announcement, on 6th August 1976, of the Government's decision to make the transfer. Responsibility for oversight of the Careers Service in Scotland and Wales was similarly transferred from the same date.

(*f*) On 20th July responsibility for exercising the powers of exemption under Section 23 of the Prevention of Oil Pollution Act 1971 in respect of discharge of effluent from land terminals receiving offshore oil production was transferred from the Secretary of State for Energy to the Secretaries of State for the Environment, Wales, Scotland and Northern Ireland. This was to simplify administration and to allow greater harmonization of discharge standards prescribed under different legislative provisions.

(*g*) The responsibility under the Militia Act 1882 for the signification

of Her Majesty's non-disapproval of the appointments of Deputy Lieutenants of counties was transferred from the Secretary of State for Defence to the Home Secretary and the Secretaries of State for Scotland and Wales in November.

The following changes were announced in 1977 but will require Transfer of Functions Orders:

(*a*) On 28th July 1977 it was announced that powers in relation to Agriculture and Fisheries in Wales, similar to those currently exercised in Scotland by the Secretary of State for Scotland, would be transferred from the Minister of Agriculture, Fisheries and Food to the Secretary of State for Wales.

(*b*) On 4th November it was announced that responsibility in Wales for all non-university institutions of higher and further education, for public libraries and for youth and community services and for adult education, would be transferred from the Secretary of State for Education and Science to the Secretary of State for Wales.

Organizations established or dissolved in 1977

Aircraft and Shipbuilding Industries Arbitration Tribunal

The Aircraft and Shipbuilding Industries Arbitration Tribunal was established under the provisions of the Aircraft and Shipbuilding Industries Act 1977 which brought into public ownership certain companies in the aircraft, shipbuilding, ship repair and slow-speed diesel marine engine manufacturing industries. The Tribunal's purpose is to determine any question or dispute which is required to be determined by the Act, or is referred to arbitration under it, and any matter in respect of which jurisdiction is given to the Tribunal under the Act.

British Aerospace

British Aerospace was established as a corporation on 29th April 1977 under provisions of the Aircraft and Shipbuilding Industries Act. It superseded the Organizing Committee for British Aerospace which had been set up by the Secretary of State for Industry. The duty of British Aerospace is to promote and secure the promotion by its wholly owned subsidiaries of the efficient and economic design, development, production, sale, repair and maintenance of civil and military aircraft, of guided weapons and of space vehicles, and the promotion of the related research. The Chairman is appointed by the Secretary of State for Industry, who also appoints, in consultation with the Chairman, the other members.

British Shipbuilders

Also under the provisions of the Aircraft and Shipbuilding Industries Act, British Shipbuilders was set up in June, and assumed control of certain companies engaged in shipbuilding and allied industries on 1st July 1977. It superseded the Organizing Committee for British

Shipbuilders which had been set up by the Secretary of State for Industry. Its duty is to promote through wholly owned subsidiaries the efficient and economic design, development, production, sale, repair and maintenance of ships and slow-speed diesel marine engines, and to promote relevant research. The Chairman is appointed by the Secretary of State for Industry, who also appoints the other members, after consultation with the Chairman. It is the statutory duty of both British Aerospace and British Shipbuilders to have full regard to the requirements of national defence.

Commission for Racial Equality
The Commission for Racial Equality was established on 28th April 1977 under the provisions of the Race Relations Act 1976. As from 13th June 1977 it replaced the Community Relations Commission and the Race Relations Board. The members of the Commission are appointed by the Home Secretary. Its functions are to work towards the elimination of discrimination, to promote equality of opportunity and good relations between persons of different racial groups and to keep under review the working of the 1976 Act.

Insurance Brokers Registration Council
The Insurance Brokers Registration Council was established on 1st December 1977 under the provisions of the Insurance Brokers (Registration) Act 1977. The Council will establish and maintain a register of insurance brokers, containing names, addresses and qualifications of all persons who are entitled to be registered; and also a list of bodies corporate carrying on a business as insurance brokers. The register and list must be printed and published within one year of the establishment of the Council and then as often as the Council thinks fit. The Council will draw up a Code of Conduct and rules governing the professional conduct of insurance brokers, and will set up a disciplinary committee. The Council consists of 12 persons elected by registered insurance brokers to represent them, of whom one is the Chairman, and five other persons nominated by the Secretary of State for Trade.

Northern Ireland Economic Council
The Secretary of State for Northern Ireland announced in the House of Commons on 28th July that a new Northern Ireland Economic Council was to be established in August to take the place of the former Council of the same name which was dissolved in 1976. The Council, which consists of 15 members (including the Chairman), is an independent body whose functions are to advise the Government on economic planning in Northern Ireland and on the likely economic and industrial effects of legislation.

Patents Court
The Patents Court will be established under the Patents Act 1977.

The Court, which will be part of the Chancery Division of the High Court and will deal with such proceedings in England and Wales relating to patents and other matters as may be prescribed by the rules of Court, will have two main functions. First, it will have jurisdiction at the first instance. Secondly, it will act as an appellate court from decisions of the Comptroller-General of Patents, Designs and Trade Marks; the Patents Appeal Tribunal, which at present has this jurisdiction, will be abolished. In certain matters the Comptroller and the Court will have concurrent jurisdiction. The judges of the Patents Court will be nominated by the Lord Chancellor from among the puisne judges of the High Court, and there will be provision in the rules for the appointment of scientific advisers to assist the Patents Court.

Sugar Board

The Sugar Board was dissolved by the Sugar Board (Dissolution) Order 1977. It had been established by Section 1 of the Sugar Act 1956. Its property, rights and liabilities were transferred to the Minister of Agriculture, Fisheries and Food by virtue of Section 1 of the Agriculture (Miscellaneous Provisions) Act 1976.

Other organizational changes

An order made under Article 16 of the Northern Ireland (Industrial Relations) Order 1976 transferred to the Labour Relations Agency the conciliation and arbitration functions of the Department of Manpower Services, Northern Ireland, with effect from 1st August 1977. This followed representations of employers and trade unions for the establishment of a conciliation and arbitration service independent of Government.

On 1st December 1977 the regional directors in England of the Department of Employment were replaced by seven Regional Manpower Service Directors (RMSDs) appointed by the Manpower Services Commission with the approval of the Secretary of State for Employment. The RMSDs represent both the MSC and the Secretary of State in their contacts with local authorities, economic planning councils, employers, unions and other government departments in the regions. They also have general oversight of the MSC's services in their regions and have direct control of MSC's special programmes for young people. A similar reorganization had been implemented in Scotland and Wales on 1st October 1977.

Management Bookshelf

Microcopying

Mrs. B. M. HOWARD, Civil Service Department

'Small is beautiful' declared Ernest Schumacher in his book pleading for the humanization of economics. Minuteness is also attractive to the office manager faced with an ever-increasing mound of papers to store. Realizing that in central London just one filing cabinet requires nearly £100-worth of accommodation, and mentally juggling with an unknown multiplicand of this cost, it is no wonder that he sees microfilm as the panacea for all his ills. But a headlong rush without a great deal of prior thought can lead to as much (if not more) wasteful expenditure than was involved in the original paper storage.

A starting point for those thinking about installing a microcopying system might well be the article by Bernard Terry and Pat Wood of the Civil Service Department, which appeared in the February 1973 issue of this journal. Entitled 'Systems design—with microcopying in mind', this succinct introduction contains no less than 21 basic questions intended, if not for the self-examination of the office manager, at least for the *pro forma* of the MS interlocutor. They direct attention both to matters requiring preliminary mental analysis and to possibilities inherent in a microfilm system.

Having given some thought to the requirements of the putative system, the potential user might well be directed to a profusely illustrated 32-page *Introduction to Micrographics*, produced by the US National Micrographics Association. This takes the novice gently through the various microforms (reels, fiche, cartridge, aperture cards, jackets, micro-opaques), formats (simplex, duo and duplex) and production mechanics, concluding with a useful glossary. In the United Kingdom copies are available, price £1·34, from the microfilm consultancy firm of G. G. Baker & Associates, 54 Quarry Street, Guildford, Surrey; members of the Microfilm Association of Great Britain (MAGB) can obtain it, at a reduced price of £1·22, from the Association at 6 High Street, Guildford, Surrey.

When the client is beginning to understand something of the complexities of the medium, both he and his MS officer are ready to move on to the CSD Management Services Handbook *Microcopying systems* (1976; 55 pages; available to government departments from HMSO (SD) as 'Form E.134'; non-government organizations should apply to Civil Service Department (MSSU), Old Admiralty Building, Whitehall, London SW1A 2AZ, enclosing a cheque or postal order for £1·30). The aim of the handbook is to assist in assignments involving the use of microcopying techniques for documentation and information retrieval

problems. It represents the combined experience of CSD's Management Services (General) Division, the Central Computer Agency and HMSO's Co-ordinator of Reprographic Services. The topics include technology and hardware; selection of the microform; COM; processing and preparation for use; the economics of microfilm; and ergonomic and behavioural factors.

Previous issues of this journal have contained numerous case histories on the use of microforms in government departments; a glance at each annual index will reveal the range of applications discussed. Another source of practical advice is the proceedings of a seminar organized by the MAGB in December 1976, published by them in 1977 under the title *Microfilm systems: design and implementation.* There are 10 papers, extending from researching a microfilm application to discussions of quality control, processing, filming and the respective merits of vesicular and diazo processes. The 56-page booklet costs £3·00 to members and £4·00 to non-members.

Mention has already been made of the consultancy firm of G. G.Baker & Associates. It is now timely to draw the reader's attention to their series of guides to micrographic products. There are three of these directories, dealing with production equipment, reader and reader/printers, and computer output microfilm. *A guide to microfilm production equipment* (2nd edition, 1977; £5·00; 175 pages) describes itself as containing 'details of the materials and equipment which may be used to generate, process and duplicate the popular microforms, together with items needed to control quality, perform finishing processes and store the final product'. (The previous edition was entitled *A guide to the production of microforms.*) It outlines the range of equipment available, both in general terms and with specific details of manufacturers' models. *A guide to microfilm readers and reader/printers* (3rd edition, 1976; £5·00; 192 pages) includes over 200 data sheets giving full specifications of commercial equipment available in Europe, together with suppliers' names and addresses. Preliminary chapters discuss the typical features of both readers and reader/printers, provide factors for selecting equipment and refresh one's memory of basic microformats. *A guide to computer output microfilm* (4th edition, 1975; 160 pages; £5·00) now appears in two volumes: Part 1 is a text-book covering all aspects of COM from recording to film duplication, including both graphic COM and CIM; Part 2 contains comprehensive details of machines and lists users who are willing to sell surplus time on their recorders and also commercial COM bureaux. These and other titles are described in the catalogue *Micrographic publications,* available from G. G. Baker & Associates, who, as well as being publishers themselves, act as one of the British agents for the US National Micrographics Association, and also sell relevant US Standards, MAGB books and those of other publishing houses relevant to microfilm.

Modern microfilm applications tend towards being active, rather than archival, systems. That is to say that the information stored on

film is used as an integral part of day-to-day work, as opposed to being stored for historical purposes. For this reason, the methods by which the data will be retrieved are one of the prime decisions that must be taken in the early stages of designing a microfilm faculty. If it is only with difficulty, after delays, and with frustration that the end user can find information, then the mechanized system is doomed to failure. There are many ways in which a microfilmed record can be retrieved: some are manual, some semi-automatic and some based on a micrographic/data processing interface which combines the low cost storage capacity of microfilm with rapid access through computer-produced and maintained indexes. *Microform indexing and retrieval systems* (1975; NMA; £1·22 to MAGB members, £1·34 to non-members; 24 pages) is an illustrated consumer handbook on the selection and design of retrieval systems, examining each technique in the light of its particular advantages and disadvantages. Another source of reference is *Information access methods for microfilm systems*, published by the MAGB (1975; 16 pages; £0·80 to members, £1·00 to non-members). This is based on an article which appeared in the journal *Microdoc* (1974, volume 13, pages 100–112), which was in turn condensed from a set of slides and lecture notes produced by G. G. Baker & Associates. These audio-visual aids have since been revised and the 1977 edition, which includes 15 different colour slides from camera originals, as well as text, can be purchased from G. G. Baker at a cost of £13·50.

In addition to documentation and information retrieval, other major applications are drawing office and other large-scale copying, and computer output microfilm. The first of these topics is discussed in *35 mm microfilming for drawing offices*, by W. J. Barrett (1970; Focal Press; 135 pages; available from G. G. Baker & Associates, price £2·75). Although the cost examples are now outdated, the text and illustrations remain valuable. So far as computer output microfilm is concerned, in addition to the Baker *Guide* discussed previously, there are two NMA publications: *COM and its applications* (1976; 192 pages; £4·21 to MAGB members, £4·50 to non-members), a compendium of 32 articles that have appeared in the US *Journal of Micrographics* since 1973; and *Fundamentals of COM* (1974; 24 pages; £1·22 and £1·34 for members and non-members respectively of MAGB)—a primer outlining the advantages of COM and illustrating some typical uses.

Two titles which are of considerable interest—albeit to specialists in very different disciplines—are *Photographic optics*, by Arthur Cox, a standard work of reference now in its 15th edition (1974; Focal Press; 596 pages; £5·50), and *Microform librarianship*, by S. J. Teague (1977; Butterworths; 117 pages; £4·00); published only last year, it is already becoming the definitive work on its subject.

The National Reprographic Centre for documentation (Hatfield Polytechnic, Endymion Road Annex, Hatfield, Hertfordshire) is concerned with 'the applications and technology of micrographic, reprographic and other new media for documentation'. Its journal, *Reprographics*

Quarterly (annual subscription £12·00), contains news items, feature articles, evaluations of equipment, and devotes several pages to abstracts of recently published papers. Those considering subscribing to the NRCd should note that there are two levels: the Basic Service, which comprises the journal, an inquiry facility and reduced rates for NRCd publications and courses; and the Reports Service, which includes the items on the basic list, plus free copies of the equipment evaluation reports (United Kingdom prices are respectively £23·00 and £46·00 a year). As befits such an organization, many of its publications are available in microfiche format, thus enabling the practitioner to build up a compact, inexpensive library of reports.

Two other specialist British magazines are *Microdoc* (the quarterly journal of MAGB; free to members, £7·00 a year for non-members) and *Microinfo*, a monthly newsletter (subscription £21·00) of particular interest to very large users and to manufacturers; it is published by Microinfo Ltd, PO Box 3, Alton, Hampshire, who operate the UK Service Centre of NTIS (the US Department of Commerce's National Technical Information Service).

A currently available facility for those who wish to establish their own mini-library on micrographics is a 'starter package' of five selected titles which is now available from MAGB. The value of the books is £14·34; they are offered at £10·00 including postage—reduced to £9·00 for MAGB members. These volumes lead the novice from a simple explanation of microforms through systems design, retrieval and indexing to the selection of suitable equipment. Details are available from the Executive Secretary of the Association, who will also supply a complete list of their own publications and those of other organizations for whom they act as sales agents.

In conclusion, the attention of those thinking about installing a microfilm system is drawn to a statement by Bernard Terry and Pat Wood: 'Microcopying is not a viable substitute for a wheelbarrow and an incinerator.' Continuing the gardening metaphor, they might have stressed the need for sieving before transplanting. With microfilm, as with computers, garbage In equals garbage Out. GIGO rules, OK!

Direct Participation in Action: The New Bureaucracy
By David Pace and John Hunter—A Review

This is an account of the authors' experience of attempting to help the Computer Division of a Government department evolve a participative style of operating. At the time of the project the authors were members of CSD's Job Satisfaction Team. As well as giving a description of the development of direct participation within the organization, the book attempts to place the project and the concept of participation in its social context. In the process the book raises questions of future significance for managers of large bureaucracies. It also provides insights into the role of an external consultant during such a project.

The New Bureacracy (published by Saxon House, Teakfield Limited, price £6·50) is a well-written and refreshing book. It comes across as an honest account of the work of two consultants obviously deeply committed to their philosophy. Nevertheless they are not blinded by that commitment and do not gloss over the difficulties they faced. The book is welcome if only for that. Despite this one is left with a feeling of frustration. The authors try to cover too many aspects and consequently do not go deeply enough into each one. The description is not quite full enough to stand on its own. One is left with a number of questions, particularly about details of the Data Preparation experiment. Having given the reader glimpses of the consultancy style employed and raised the dilemma inherent in helping others to do it themselves, the book leaves one wanting more detail of the ways in which the authors coped and of their own role. The account would have benefited from a fuller analysis of questions raised in the final chapters, such as the extent to which the shop floor wants participation. To a reader not fortunate enough to have been through an experience like the authors, drawing one's own conclusions calls for too much imagination.

Despite the authors' undue modesty, the book is worth while and interesting. It raises important questions, particularly about the future of ADP work, and does so with a welcome practical emphasis. The fact that one wants more is recommendation enough.

J. B.

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Readers may like to know that selections of articles which have appeared in *MSIG* are available from the Editor. Each selection covers a specific subject-area, for example:

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Other selections include: *Financial Checking and Internal Audit* (two articles; 16 pages; price 51p); and *Performance Measurement* (two articles; 16 pages; price 51p).

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